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Connecticut State Medical Journal

Volume XXV JANUARY, 1961 Number 1

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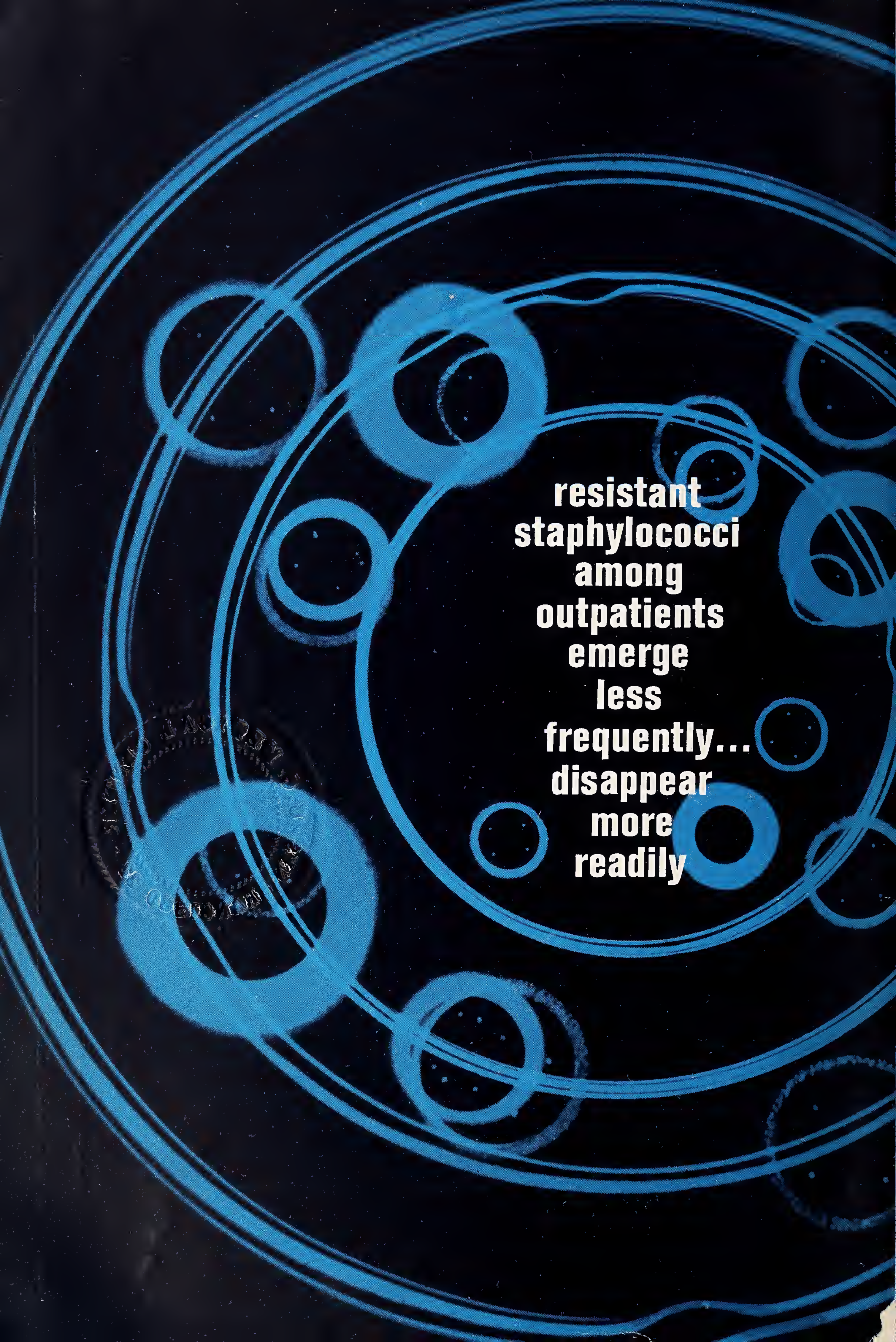
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References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* 173:475, 1960. (2) Goslings, W. R. O., & Büchli, K.: *Arch. Int. Med.* 102:691, 1958. (3) Goodier, T. E. W., & Parry, W. R.: *Lancet* 1:356, 1959. (4) Fisher, M. W.: *Arch. Int. Med.* 105:413, 1960. (5) Petersdorf, R. G., *et al.*: *Arch. Int. Med.* 105:398, 1960. (6) Glas, W. W., in Symposium on Antibacterial Therapy, Michigan & Wayne County Acad. Gen. Pract., Detroit, September 12, 1959, p. 7. (7) Modarress, Y.; Ryan, R. J., & Francis, Sr. C. F.: *J. M. Soc. New Jersey* 57:168, 1960. (8) Rebhan, A. W., & Edwards, H. E.: *Canad. M. A. J.* 82:513, 1960.

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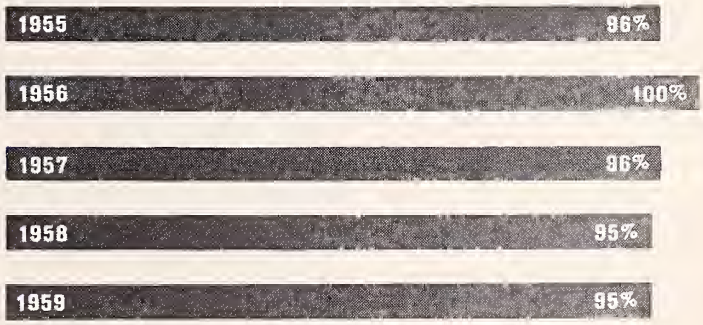

These sensitivity tests were done by the disc method on 310 strains of coagulase-positive staphylococci. Strains were isolated from patients seen in the emergency room. It should be noted that among inpatients, resistant strains were considerably more prevalent.

*Adapted from Bauer, Perry, & Kirby[1]

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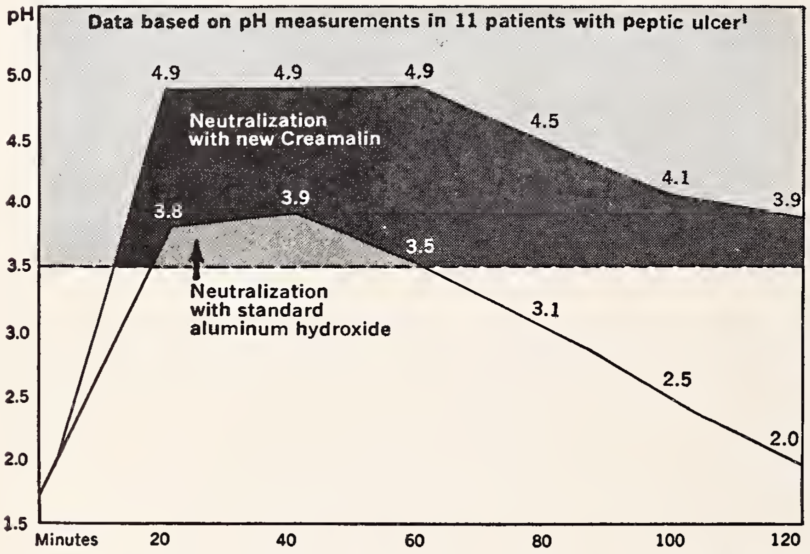

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1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: **J. Am. Pharm. A.** (Scient. Ed.) 48:384, July, 1959.

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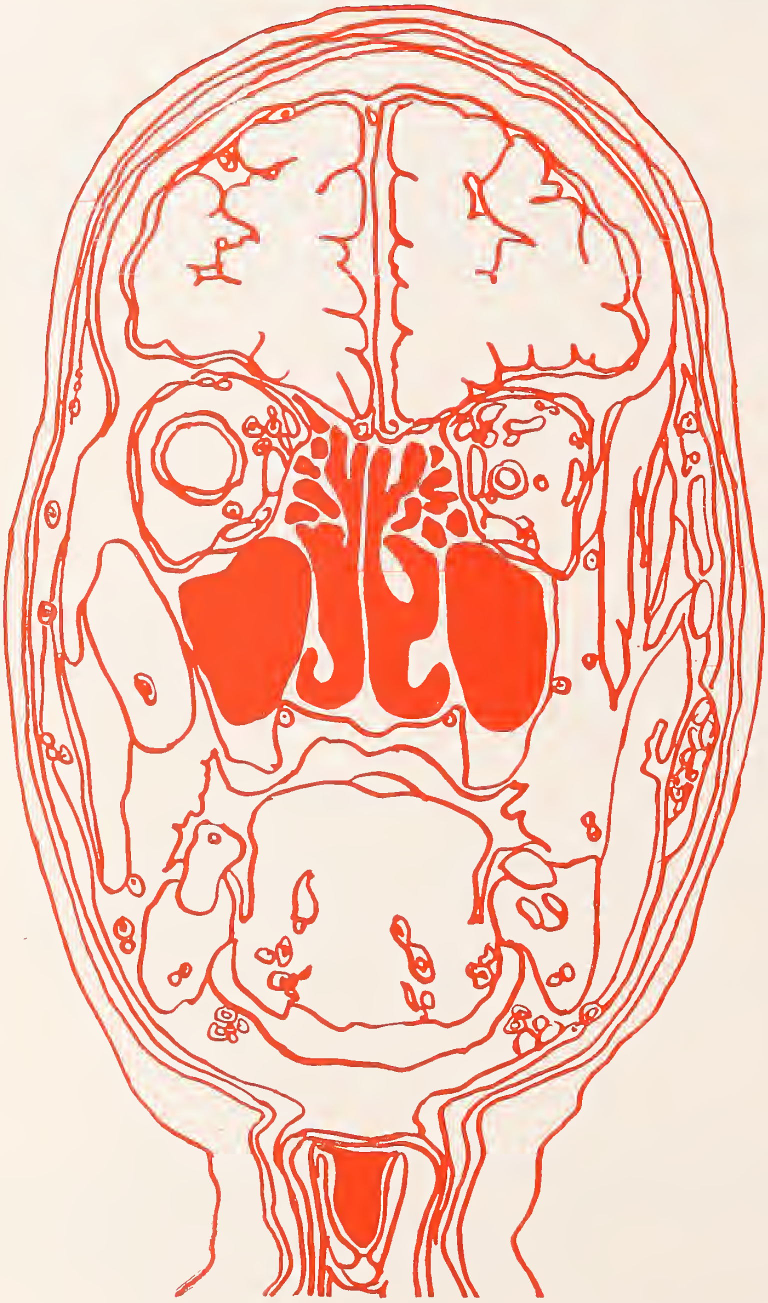

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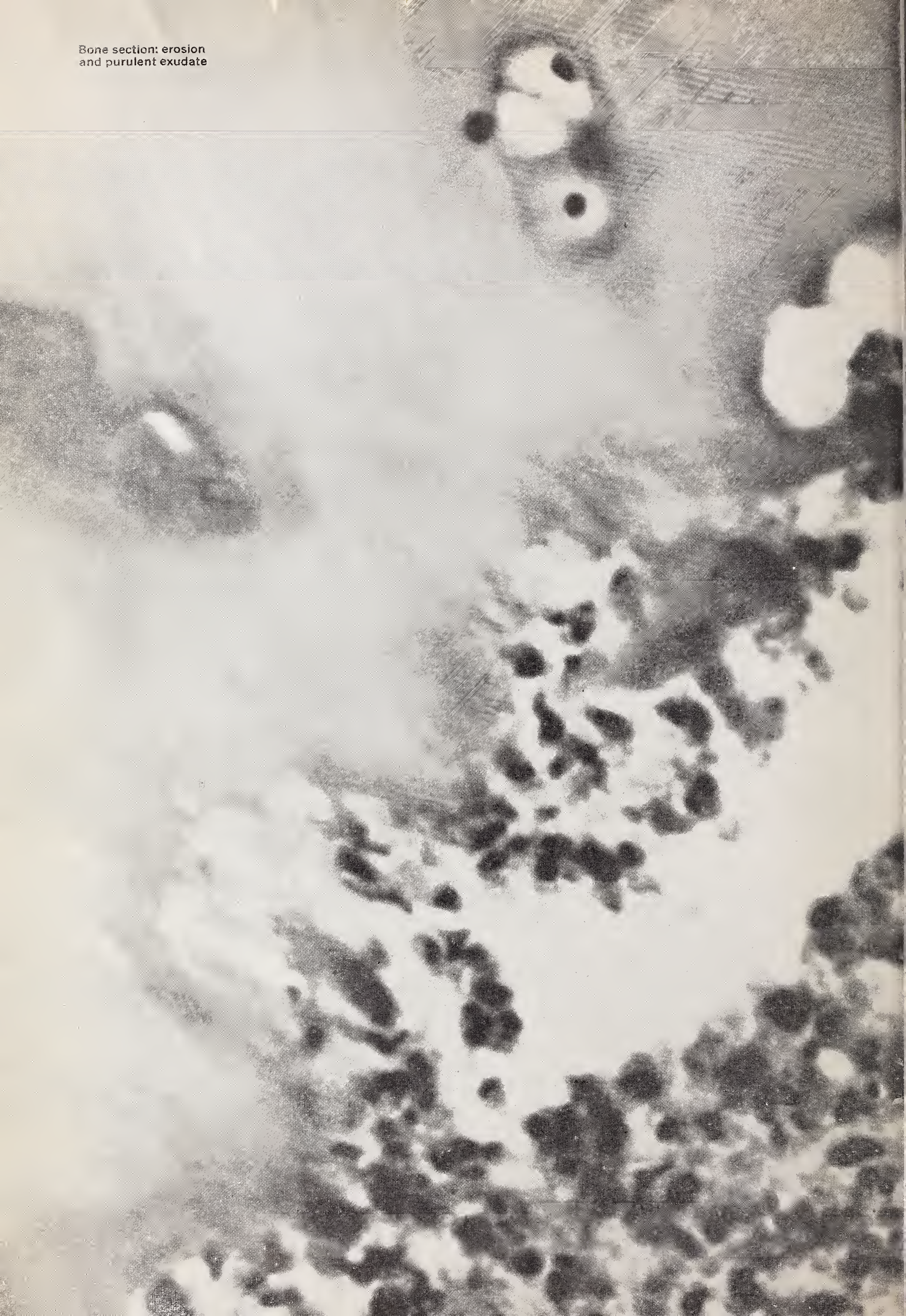

CHRONIC ULCERATIVE COLITIS

EVERETT D. KIEFER, M.D.
Boston, Massachusetts

Since this is a combined meeting of surgeons and internists I have chosen chronic ulcerative colitis as a subject because it is a disease with a high requirement for medical-surgical collaboration. Recently, in the treatment of this disease, the emphasis has been on surgery. Surgeons have taken up the challenge of a colectomy in a chronically ill and often debilitated patient and the problem of the construction of a satisfactory permanent ileal stoma. Far from a simple routine procedure, the operation of ileostomy requires a complete understanding of the conditions to be met, careful planning and skillful execution if the patient is to have a trouble-free stoma. This aroused surgical interest has brought about a gratifying improvement in the mortality following colectomy and a diminished morbidity associated with the functions of the ileal stoma. The result has been a higher degree of acceptance of the surgical treatment of ulcerative colitis by both patients and physicians.

Contributing to this increased acceptance have been improvements in the prosthetic appliances required by the permanent ileostomy. Also, much credit is due the ileostomy clubs that have been formed in many cities. Persons with personal experience with ileal stomas have been able to give encouragement and useful advice to patients regarding the important details in the care of the stoma that make life with an ileostomy endurable and without serious handicaps.

When we evaluate the results we find that patient satisfaction with the ileostomy life is amazingly good. This is particularly true for those patients who have had the harrowing experience of several years of invalidism or periodic disability from ulcerative colitis. Most of the young girls undergoing surgery subsequently marry and many have children.

It is recognized that an ileostomy presents an added hazard to pregnancy. Prolapse of the ileum and small intestinal obstruction occurring near term are the most common complications. It has been our practice to advise against further pregnancies for women who already have children, but we have not considered the risk too great for the childless woman who desires a family. The social and occupational handicaps related to the permanent ileostomy are not entirely absent but in the main they are not serious.

Before we establish too good a case for the surgical treatment of ulcerative colitis, an examination of some of the shortcomings of surgery and an evaluation of what can be accomplished by the nonsurgical management of the disease are in order.

We now have some follow-up figures revealing our experience with ulcerative colitis in two separate five year periods. During the combined 10 years there were 41 emergency ileostomies with or without complications, with a mortality of 17 per cent; 240 elective operations were performed with a mortality of 6.3 per cent.

Of the 259 patients surviving operation, 19 per cent had to have one or more revisions of their ileal stomas and almost an equal number required treatment for minor or major late complications of surgery. An important number of patients, therefore, have serious late complications which usually take the form of obstruction or other motility disturbance, with fluid-electrolyte loss the most dangerous sequela. Frequently the first manifestation of partial obstruction is excessive fluid discharge from the stoma. Other late complications include prolapse of the ileum, retraction, fistulas, and disturbances of circulation to the ileal spur. These difficulties which appear with the ileal stoma have pointed up the importance of experience on the part of the surgeon who performs the ileostomy.

Although for several years our clinic has been more radical than most other clinics in recommending surgical intervention for ulcerative colitis, we have observed a tendency toward even further application of surgery. In the five years 1941 to 1945 inclusive, 272 new patients with ulcerative colitis were seen. Twenty-six per cent were operated on at the time of their first admission and the follow-up shows that an additional 26 per cent either returned for operation or were operated on elsewhere, making a total of 52 per cent of patients eventually coming to surgery. In comparison with the five years 1951 to 1955 inclusive, during which time 275 new patients were seen, 34 per cent were operated on at

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*Department of Gastroenterology, The Lahey Clinic, Boston, Massachusetts.

Read before the combined meeting of the Connecticut Society of American Board Surgeons and the Gastroenterological Section of the Connecticut State Medical Society, New Haven, Connecticut, May 25, 1960.

the time of their first period of observation and subsequently an additional 22 per cent came to surgery, a total of 56 per cent.

Without doubt one of the reasons for the increased tendency to resort to surgery has been the absence of any significant improvement in the ultimate or long-term results in the nonsurgical management of ulcerative colitis. This appears to be true in spite of the advent of the antibiotics and corticosteroids which are considered the most valuable and effective tools in the medical treatment of this disease.

In the 1941 to 1945 period when the steroids were not yet developed and antibiotics were available to only a few patients, follow-up study shows that in 32 per cent of 200 nonsurgical cases the disease was either arrested or satisfactorily controlled. In the 1951 to 1955 period when steroids and antibiotics were available for use in many cases, good and satisfactory results were obtained in only 27 per cent of the cases, actually five per cent less than in the earlier experience, although the difference is of questionable significance.

Although the medical treatment of ulcerative colitis is far from satisfactory, it should not be forgotten that a large number of patients manage with the help of a good program to live a normal life and keep their disease under control. Also, in some cases the disease appears to become totally arrested. Treatment, therefore, is selective; surgery is not indicated in every case.

We have recently studied and reported on a group of 73 cases of arrested ulcerative colitis.[1] These patients had all experienced a symptom-free uninterrupted remission of five years or longer. Some had been under observation for more than 20 years.

The common denominator of this group was the mild or moderate severity of the disease. Consideration of the many facets of these cases, such as the extent of involvement, the degree of tissue destruction, the presence or absence of complications and the systemic effects, simply added up to less than average severity of the disease. Although good fortune in having a less severe type of ulcerative colitis was a real factor, therapeutic measures and modified living habits were important in bringing about a remission and avoiding further flare-ups. That these cases have to be considered arrested and not cures is shown by the fact that recurrences have been observed in patients who have been symptom-free for over five years.

For the present at least it must be admitted that the only known positive cure of ulcerative colitis is total colectomy. On the other hand this is an extensive operation, associated with considerable risk and the results even at best are not without some shortcomings. No one really wants an ileostomy and a partially damaged colon may in many instances be better than no colon at all. Therefore, for the individual patient, the indications for surgical or medical treatment require the consideration of many factors.

When the disease presents in the acute, severe form with fever, toxemia, severe bloody diarrhea and prostration—the so-called fulminating ulcerative colitis—the decision is not only most difficult but most urgent. At this point the duration of the disease is an important consideration. If it is the patient's first attack or the previous colonic symptoms have not been severe or have been present for only a few months, the therapist is justified in persisting with a conservative program of supportive therapy and anti-infectious drugs as long as severe hemorrhage or signs of perforation or peritonitis do not occur. The thought behind this is that if the patient weathers this attack, the residual colonic damage may not be severe and it may be possible to control the disease without surgery. On the other hand, if the present attack is a repetition of a number of similar exacerbations or if it is known that the colon is extensively ulcerated and damaged from long-standing disease, surgical intervention should be carried out as soon as the best possible preparation for operation has been accomplished.

Severe blood loss may make operation imperative. A sudden cessation of the diarrhea, loss of peristaltic sounds, and distention of the abdomen as a result of gaseous dilatation of the colon are characteristics of extremely severe ulcerative colitis and are usually indications for emergency surgery. It is in this type of case that medical-surgical collaboration is most necessary.

In many such instances an ileostomy alone produces dramatic relief. If the disease is of short duration and it is not known that the colon will have to be sacrificed this is the operation of choice.

If gross hemorrhage or severe blood loss has occurred or if it has been demonstrated that the colonic mucosa is extensively destroyed, ileostomy plus subtotal colectomy is more desirable. In several cases of profuse hemorrhage the bleeding has persisted after ileostomy until colectomy was done. In our clinic it is thought that combining proctectomy with the ileostomy and colectomy adds too greatly to the operative risk, and our surgeons usually leave the perineal procedure for a later stage.

The indications for "elective" surgery in ulcerative colitis are: chronic invalidism as a result of disabling diarrhea or incontinence, with chronic malnutrition, anemia and repeated attacks of disabling and often life-threatening colitis. A number of complications which include some forms of arthritis, pyoderma gangrenosum, iritis and biliary cirrhosis may add to the indications for surgery, particularly if they persist in spite of medical management.

Probably any patient who is not in need of emergency operation should have a thorough trial on a medical program. He is more likely to be content with a subsequent ileostomy if he is convinced that everything possible in the way of conservative treatment had been tried.

The decision regarding the advisability of surgery is based on an evaluation of the patient's disability, an estimate of the degree the disease affects his general health and a determination of the amount of irreversible damage to the colon, as demonstrated by proctosigmoidoscopic and roentgenologic examinations. In most cases, the frequency and the severity of the flare-ups of colitis activity are the most important factors since considerable damage to the colon can be compensated for if the colitis remains in remission. In other instances, usually when the disease is of long duration, the main cause of disability is the structural damage to the colon and rectum.

It is in the area of chronic, unsatisfactorily controlled and chronic or intermittently disabling disease that surgery is finding increased favor. In the light of our experience with ulcerative colitis it is a mistake to have patients continue for years with frequent hospitalizations and intermittent bouts of sepsis because of the danger of damage to the liver and other organs arising from chronic infection and blood loss.

The observation has been made repeatedly that cancer of the colon and rectum develops more frequently in patients with ulcerative colitis than in individuals without colitis but of the same age. Carcinoma associated with ulcerative colitis tends to be of a high grade of malignancy, rapidly advancing and often multiple. It has been our experience that in cases in which a malignant lesion was diagnosed preoperatively, resection has resulted in a five year "cure" in only rare instances. A large majority of patients die of recurrent disease within a year. On the other hand, when a small malignant lesion has been found unexpectedly in a colon resected for intractable ulcerative colitis, the curability rate was excellent. Recently Bargen and Sauer[2] reported a series of 101 cases of resection of the colon or rectum for carcinoma associated with ulcerative colitis; 32 patients were still living five years after operation. This is by far the most favorable experience reported anywhere in the literature in cancer of the colon and rectum with ulcerative colitis.

There are no clinical observations which lead to a reliable estimate of the chances of cancer developing in a patient with colitis. The pseudopolypoid changes in the mucosa are not consistently present before malignant degeneration. It is questionable whether pseudopolypoid changes have any bearing on the onset of cancer which actually develops more frequently in the atrophic mucosa that may result from colitis.

Apparently persistent and prolonged activity of colitis is not a prerequisite since carcinoma has developed after long periods of asymptomatic arrest of the colitis, as well as in the nonfunctioning colon or rectum after ileostomy or partial resection. A history of colitis of long duration, that is, from 10 to 30 years, particularly when the onset was in childhood, is common in patients with malignant degeneration.

Should the danger of malignant degeneration be considered an indication for total colectomy? If so, it would be equally applicable to all cases of ulcerative colitis since the severity of the colitis and the degree and type of organic changes apparently have no bearing on the incidence of this complication. We can only balance the statistical probability of cancer against the risks and undesirable features of total colectomy and a permanent ileal stoma, and for the present the incidence of cancer appears to be too small and too unpredictable to be considered a major indication for total colectomy. The prevalence of cancer in resected or autopsied cases is 4.4 per cent.[3] This represents the highest prevalence rate. The low limit would be 2 per cent, found by diagnostic studies in nonoperated cases.

No data are available on the total incidence of carcinoma in patients with ulcerative colitis whose course was followed until their death but it would appear to be about the same as the mortality rate of colectomy and, therefore, a colectomy on a prophylactic basis would not be advantageous to the patient.

The etiology of ulcerative colitis continues to puzzle clinicians who have come up with many conjectures but with very little fact that has direct bearing on the question. Attempts to establish as the etiologic agent specific or nonspecific bacterial protozoon or viral agents have not been successful. The sepsis occurring so frequently in cases of ulcerative colitis is now considered a secondary invasion of inflamed mucosa by bacteria.

The concept of ulcerative colitis as a psychosomatic disease has had a period of considerable popularity. While there is no question that emotional stress may profoundly affect the symptoms of ulcerative colitis, as it does in many other chronic diseases, our experience has led us to believe that the emotional instability, character defects and the dependency pattern often observed in these patients are results rather than causes of the disease. It is not surprising that a young person afflicted by a disease such as ulcerative colitis with which he, his parents and his physician seem unable to cope will seize upon someone for dependence. The nature of the symptoms, the associated embarrassment and social handicaps for a young person seem adequate to produce a neurosis in most of us. We have observed tremendous psychologic improvement in patients after successful colectomy. I am also reminded of the young woman with moderately severe colitis who was disabled by six or seven stools a day. For this and other reasons she subsequently had a lobotomy. Following this she was markedly improved subjectively. She continued to have six or seven stools a day but it no longer bothered her, and she eventually died of amyloid disease apparently related to the persistent colitis. It seems, in retrospect that colectomy instead of lobotomy would have been more rational therapy.

Abnormal concentrations of certain physiologic ferments have received attention as possible factors in the pathogenesis of ulcerative colitis. The mucolytic enzyme, lysozyme, was considered a possible etiologic agent by dissolving the protective layer of colonic mucus, leaving the surface exposed to digestive ferments. It is now realized that the increased lysozyme titer found in active colitis is a result and not a cause of the disease.

An increase in the proteolytic pancreatic enzymes as a result of hypermotility of the small intestine has been postulated as the cause of the initial damage to the colonic mucosa but experimental and clinical evidence to support this has been lacking.

The clinical association of arthritis and erythema nodosum along with some evidence that in this disease there are changes in the basement membrane of the mucosal epithelial cells has led to the inclusion of ulcerative colitis as a collagen disease. This concept has not been particularly rewarding except that it has led to the more recent theory that colitis is an auto-immune phenomenon. That the initial inflammatory reaction in the colonic mucosa is an antigen-antibody reaction is the most attractive of the theories advanced, perhaps because it is the latest. Food and inhalant allergy as a cause of ulcerative colitis has had its exponents for many years and in some cases such hypersensitivities are important but the concept is too narrow to explain the bulk of cases. A convincing demonstration that the initial inflammation is an antigen-antibody reaction remains for the future but the concept does supply a working basis for the use of certain therapeutic measures.

Medical Treatment

The medical management of ulcerative colitis may be divided into three areas: supportive, anti-inflammatory and anti-infectious.

SUPPORTIVE THERAPY

Supportive treatment is of value in every case but the number and extent of supportive measures vary with the individual patient.

The essential principles of the diet in ulcerative disease of the intestine are that it be bland and low in residue to avoid stimulation of motility, high in protein to compensate for a higher rate of protein catabolism, adequate in total caloric value to correct the usual malnutrition and attractive to the patient to insure adequate intake. Supplemental vitamins are usually necessary.

Anticholinergic and antispasmodic drugs may be used in the hope of controlling intestinal hypermotility but they are of questionable value.

Other supportive measures include intravenous fluids and electrolytes, and transfusions of whole blood. Sufficient blood should be given to keep the hemoglobin well above 11 gm.

The emotional disturbances so frequently associated with ulcerative colitis cannot be ignored. There is no question but that psychic stress may precipitate or aggravate symptoms. Well-considered psychotherapy directed toward relief from emotional trauma and psychic stress carried out by an internist with good rapport with the patient may do much to quiet an active attack or maintain a remission. In some instances the aid of a psychiatrist familiar with these cases may be of real value. It is to be remembered that the effects may be undesirable and real harm may be done by bringing up emotional problems and past psychic traumatic experiences. Psychotherapy, while being of definite value, really belongs under supportive therapy. Certainly it is a mistake to rely totally upon the psychiatric approach for the therapy of this disease.

ANTI-INFLAMMATORY MEASURES

Clinical experience is now adequate to prove that the adrenal corticosteroid hormones are powerful agents capable of modifying the course and symptoms in many cases of ulcerative colitis. There is also conclusive clinical evidence that these hormones do not cure ulcerative colitis. Their main modes of action are their euphorigenic properties which increase the patient's appetite and sense of well-being, and the anti-inflammatory effect upon certain stages of the ulcerative process in the colonic mucosa. This latter effect is of special interest with regard to the more recent concepts of the pathogenesis of the disease. If the initial inflammation is an auto-immune or other form of antigen-antibody reaction we have an acceptable rationale for the use of the steroids on the basis of their anti-inflammatory effect in other allergic or immunological inflammations. In fact, the observed clinical effects of steroid therapy in early, mild and noninfected cases of colitis appear to bear this out and if the disease remained a simple allergic reaction, hormone therapy might indeed lead to a cure or at least a permanent control of ulcerative colitis. In early nonfebrile cases before severe irreversible changes have occurred in the bowel the symptomatic relief from steroid therapy is usually impressive and the reduction of the mucosal inflammation as observed by proctosigmoidoscopic examination may be equally dramatic.

Unfortunately, ulcerative colitis is of more complex pathology, with secondary bacterial invasion as an added type of inflammation and tissue destruction. Bacterial infection occurs at variable times and in variable degrees of severity and probably accounts for many of the febrile reactions observed in patients with more active and more severe disease. Although the steroid hormones may modify the reaction to infection, their action has not been considered favorable in bacterial infections in general and it is even suspected that they may actually promote the spread of sepsis. Consequently if steroids are used in ulcerative colitis associated with fever and other manifestations of sepsis, the temperature may fall and the abdominal signs may subside but tissue necrosis from bacterial invasion may proceed to intestinal perforation or gross hemorrhage. Therefore in the acute fulminating case or in the case with severe chronic sepsis, steroid therapy should be withheld until it can be determined whether the secondary infection can be controlled by other therapeutic measures.

In certain febrile cases in which surgical treatment is obviously necessary, steroids may be used as a stimulant and aid in preparing the patient for operation. In chronic long-standing cases characterized by a contracted, rigid, fibrotic colon and rectum, steroid therapy can be expected to yield but little benefit other than stimulation of the appetite and production of euphoria.

ANTI-INFECTIOUS MEASURES

Since nonspecific secondary infection occurs in many cases of ulcerative colitis, anti-infectious agents are important therapeutic tools. Broad spectrum antibiotics are the logical choice because of the mixed type of infection, and because selection of an antibiotic on the basis of sensitivity tests is impossible.

Penicillin and chloromycetin given parenterally in moderately large dosages are often effective. Tetracycline intravenously is often used in acute septic cases. Administration should be continued for several days after the fever subsides. Neomycin is too irritating to the intestine to be tolerated very long. Its main usefulness is in preparation of the colon for colectomy.

Azosulfapyridine (Azulfidine) is extensively used as a peroral anti-infectious agent. It apparently does reduce the flora of the intestinal content and may improve symptoms in both febrile and afebrile cases. Sensitivities to the drug with increased diarrhea and drug fever may occur, but in general it is a safe and useful medication.

It has been our practice to start the supportive measures and the antibiotics in the treatment of the patient with fever, withholding the use of the steroids until the sepsis is controlled.

Rational treatment of ulcerative colitis depends upon a complete diagnosis, which includes an estimate of the stage of the disease, its activity, severity and the extent of the organic damage which has already occurred.

The diagnostic evaluation of any particular case is made by direct inspection of the mucous membrane through the proctosigmoidoscope, by x-ray examination of the colon and by tests that disclose the systemic reactions and effects. The rectum and sigmoid are involved in 95 per cent of cases and the best information concerning the activity of the disease can be obtained from a visual estimate of the degree of congestion, edema, ulceration, friability and exudation. The stage of the disease and extent of involvement can best be determined from the history and the x-ray examination.

Ulcerative colitis usually presents as a chronic, partially disabling diarrhea, with intermittent attacks of bloody diarrhea associated with variable degrees of disability and depletion. The first thought is of a medical program, particularly if the disease is of short duration and the systemic effects are not critical, and also in more long-standing cases, until the problem can be fully evaluated. The general principles of therapy are to bring about a remission by means of bed rest, diet, antibiotics and steroids and establish a regimen designed to avoid subsequent flare-ups which tend to add to the organic damage in the colon.

The maintenance program and its success in preventing exacerbations are extremely important and may spell out the difference between arrest of the disease and the final need for surgery.

Some patients find it unnecessary to follow any dietary restrictions but most of them do better on a bland diet. A low residue diet may be required when considerable chronic changes are present in the colon. Food idiosyncrasies apparently are important. Improvement by a milk-free diet is obtained by so many patients that it is general practice to restrict milk to small amounts cooked in foods. Since the diets contain little or no fresh vegetables or fresh fruits, vitamins C, A and D are supplemented.

Patients with fever should be kept in the hospital until the temperature is normal. When steroid hormones have been used to produce a remission of inflammation of the colonic mucosa it is usually advisable to continue giving them in moderate dosages for several weeks. After 10 or 12 weeks the dosage may be tapered off and administration stopped, but should be resumed immediately if there is any indication of a flare-up of activity.

When x-ray studies show that the involvement is limited to only a segment of the large intestine, the mucosa is fairly intact, and the wall is not contracted or made rigid by cicatricial changes, continuance of conservative treatment is justified unless severe acute attacks are not prevented by this therapy. If changes in the colon are extensive and far advanced, there may be no asymptomatic periods and chronic invalidism prevails. Surgeons have sometimes been critical of their medical associates for persisting in the nonsurgical management of ulcerative colitis. When medical treatment fails to relieve serious chronic disability or to prevent repeated life-threatening flare-ups and the clinical course is one of gradual deterioration, the criticism is fully justified.

It is generally believed that arthritis is a common complication of ulcerative colitis and its presence an additional indication for colectomy. Fernandez-Herlihy,[4] of our clinic, analyzed 555 cases of ulcerative colitis and found articular manifestations in 17 per cent. The clinical data indicated that five types of joint involvement are associated with ulcerative colitis, some of which are concurrent but unrelated to the colitis, while others have a close relationship. Rheumatoid spondylitis was the most common type, accounting for five of the 17 per cent with articular manifestations, and rheumatoid arthritis occurred in 3.2 per cent. In these two types the relationship with the colitis was not clear and it appeared that their presence was not an indication for colectomy. The relationship between the colitis and the arthralgias was closer and accounted for 4.2 of the 17 per cent; erythema nodosum occurred in 2.8 per cent and the group called acute toxic arthritis was found in 1.8 per cent. Arthritis is seldom in itself an indication for colectomy but if the joint complications are identifiable as erythema nodosum, arthralgia, or acute toxic arthritis, they may add weight to the decision. In cases of spondylitis and rheumatoid arthritis, the articular benefits derived from colectomy are likely to be disappointing.

Summary

In the treatment of chronic ulcerative colitis the emphasis recently has been on surgery. At the Lahey Clinic 56 per cent of patients ultimately have surgical treatment. The clinical results of nonsurgical treatment have not shown much improvement in spite of the availability of antibiotics and steroids.

However, surgical treatment has many shortcomings and in a considerable portion of cases much can be done without surgery.

The indications for surgery in the acute fulminating case are evidence of severe and extensive destruction of the colonic mucosa, gross hemorrhage, and impending perforation. In the chronic case the indications are chronic invalidism, chronic incontinence, repeated severe acute attacks, certain forms of arthritis, intractable pyoderma gangrenosum, and hepatic disease.

Cancer of the colon and rectum is more prevalent in patients with ulcerative colitis but the incidence is not high enough to make the dangers of malignant degeneration an important indication for colectomy.

The present most attractive concept of the pathogenesis of ulcerative colitis is that it is an autoimmune phenomenon complicated by secondary bacterial sepsis.

Medical treatment consists of supportive, anti-inflammatory agents (the steroids) and anti-infectious agents (the antibiotics). Rational treatment of the disease depends upon a complete diagnosis including the stage of the disease, its activity, severity and the extent of the organic damage already present.

Steroid therapy is most effective in the early stages before secondary sepsis has occurred or marked chronic fibrosis has resulted. Use of the steroids is best deferred in the septic case until the sepsis has been controlled by antibiotics.

Some forms of arthritis such as spondylitis and rheumatoid arthritis may be coexisting diseases but are not improved by colectomy. On the other hand, erythema nodosum, arthralgia and toxic arthritis may respond quickly to the successful treatment of the ulcerative colitis.

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LEAD POISONING IN CHILDREN

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A case of lead poisoning, recently observed in Connecticut, is reported and the newer treatment with calcium EDTA is discussed and outlined. The relative importance for diagnosis of a history of pica, gastrointestinal and central nervous system symptoms, "stippling," anemia, lead lines, radioopaque flecks in the gut, coproporphyrinuria, glycosuria urinary, and blood lead levels are evaluated. It is pointed out that treatment must often proceed after clinical evaluation and the performance of the more rapid laboratory tests and often prior to completion of all specific chemical tests for lead.

Introduction

Lead poisoning in children is not rare. The following case recently observed on the Pediatric Service of the Mount Sinai Hospital, Hartford, Connecticut, is presented as a reminder of the clinical features of this condition. A careful appraisal of the clinical features is often of more immediate importance to correct diagnosis than blood and urine lead levels; these determinations take time, and treatment must often proceed on an emergency basis.

The presence of basophilic stippling, excessive urinary coproporphyrins, and persistent glycosuria, radiological evidence of opaque material (lead) in the gut or the presence of "lead lines," at the metaphyses of long bones may also be helpful.

Case Report

This two-year-old female child was admitted to the Mount Sinai Hospital on May 22, 1959, because of a three-day history of nausea, vomiting, diarrhea, lethargy and irritability. The child had been frequently observed eating dirt and nibbling paint off window sills in the previous six weeks. Detailed interrogation of the mother also revealed that her child had been eating crumbling plaster from a broken wall in the previous three months.

Physical examination revealed a well-developed child who was restless, anxious, and irritable, crying and thrashing about constantly. Marked pallor of the skin and mucous membranes was evident. Skin turgor was poor. There were no other abnormal physical signs. Temperature was 100° F. (rectally) on admission.

The blood haemoglobin was found to be 7.6 grams and there were 14,700 WBC. Marked punctate basophilia was present. X-rays revealed lead lines in all the long bones. Pretreatment blood lead was 0.20 mg. lead per 100 grams of blood, (normal is less than 0.06 mgm. per cent), urinary lead was 0.90 mg. per liter of urine, and urinary coproporphorin 4+. Urine revealed 4+ acetone. Sickle cell preparation was negative. Blood potassium was 4 MEQ./L and CO_2 26.4 millimoles per liter.

For the first two days the child was markedly irritable, screamed a great deal, and was very apprehensive. No signs of meningeal irritation or convulsions appeared. During the first twelve hours of hospitalization the child was hydrated with parenteral fluids. (M/6 sodium lactate and 2½ per cent Dextrose in Half Ringer's solution).

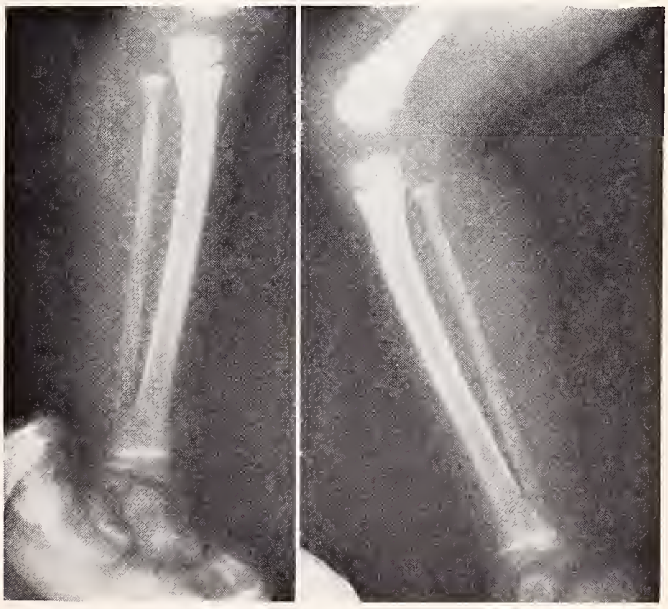

FIGURE 1. Lead Poisoning, Long Bones (Femur and Tibia) of a child two years of age, showing an increase in the thickness and density of the zones of provisional calcification. The child nibbled paint from window sills and ate crumbling plaster (See case report).

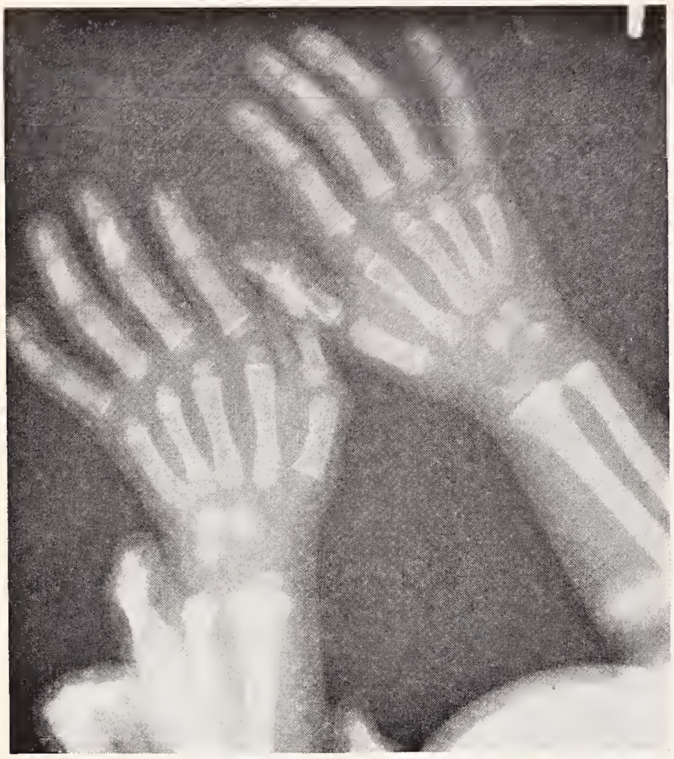

Figure 2. Lead Poisoning. X-ray of both hands and wrists showing "lead lines" in the left radius and ulna, in the metacarpals, and in the phalanges. (See case report.)

Calcium disodium versenate was administered intravenously. 250 mg. was given twice daily for five days, discontinued for three days then given for five more days. Child improved rapidly after the second day of calcium versenate therapy.

On June 11th, the blood lead level was 0.08 mg. per 100 grams, and the urine lead level was 0.15 mg. per liter of urine. The child was now afebrile and asymptomatic and remained so until discharge on June 13, 1959. On June 19, 1959, repeat x-ray examination of the long bones revealed persistence of the "lead lines."

Discussion

(1) ETIOLOGY

The sources of lead vary with the age group affected. In infants, poisoning may arise from the use of improperly soldered evaporated milk cans and from lead nipple shields. Baby powders containing lead were found to be the cause of poisoning in Japanese and Chinese children. In the preschool age group pica (perverted appetite) may lead to the nibbling of objects painted with lead paints such as crayons, toys, cribs, crumbling plaster, window sills, and furniture. Some have acquired lead by eating putty, drinking water from lead pipes and some from eating food baked in lead dishes. Intoxication from inhalation of lead fumes in Connecticut is infrequent. Some of the ingested lead reaches the circulation and is then carried to many parts of the body. Lead is deposited in long bones. In the brain, encephalitis may ensue.

The incidence of plumbism is greater in summer months because increased vitamin D aids in the absorption of lead and more frequent dehydration and acidosis mobilize lead from tissue deposits.

(2) SIGNS AND SYMPTOMS

The signs of chronic lead poisoning in children differ from those seen in adults. Lead encephalopathy is the commonest manifestation in the young, and it is probably due to intense cerebral edema and a marked increase in intracranial pressure. Acute encephalopathy in children may suddenly appear even though the intake of lead has been over a long period of time. This is in contrast to adults in which the symptomatology of chronic exposure may reveal itself more insidiously. Hyperirritability, bizarre behavior patterns, coma, and convulsions are common. Early features of the poisoning, however, may be due to disturbed gastrointestinal function; they are anorexia, vomiting, abdominal cramps and constipation. Usually there is also a moderate degree of anemia present. Peripheral neuritis, common in adults, is rarely found in the early stages in children, nor is the lead line of the gums frequently found. At the onset of encephalopathy visual disturbance and changes in pulse and respiration rate are other frequent reactions. Cervical rigidity may be present. A bulging fontanelle in infants, papilledema and separation of the sutures may result from the high intracranial tension.

A history of pica is the single most important clue to the early diagnosis of plumbism in children. Slum areas where flaking paint and loose plaster are abundant and limited personal supervision in families with both parents working contribute. Pica should be considered abnormal after 18 months of age. According to some authors, at least three months must pass from the onset of pica to the onset of symptoms of lead poisoning. Retarded children develop pica more frequently than normal children. Many of these patients have eosinophilia and their stools are often found to contain ova and parasites. Apparently some of these children with pica also ingest dirt which contains ova.

(3) LABORATORY AND RADIOLOGICAL INVESTIGATIONS

The most useful laboratory examinations for rapid establishment of a presumptive diagnosis of lead poisoning are x-rays of the long bones and abdomen, the test for coproporphyrin in the urine, blood examination (including hemoglobin, reticulocyte count, basophilic stippling and normoblasts) and cautious lumbar puncture. The lead lines are not due to lead in the bones, but to interference with bone deposition leading to excessive deposition of phosphorus. An increase in urinary coproporphyrin is a constant and early sign of lead poisoning, and can be demonstrated by a relatively simple qualitative test on freshly voided urine. Briefly, the urine is acidified to pH4 with acetic acid. Coproporphyrin is extracted immediately from the acidified urine into ether and then from the ether into 1.5 N. hydrochloric acid. Intense red fluorescence of the hydrochloric acid layer when viewed under a Wood's light is indicative of an increased amount of coproporphyrin. Quantitative coproporphyrin determinations on 24-hour urine collections can also be performed. These may be helpful in long-term management of patients. There may be an increase of serum bilirubin due to excessive haemolysis. Values of 0.06 mg. per 100 gm. of whole blood or over for lead in blood are considered pathological. Urinary excretion of lead in amounts over 0.08 mg. or more per 24 hours occurs only in lead poisoning. Blood lead determinations are available at the state laboratory. Whole blood is used for the determination as most of the blood lead is in the red cells.

The urine shows slight albuminuria and often glycosuria and some degree of acetonuria.

The cerebrospinal fluid pressure may be increased, the protein is increased, the sugar normal or raised and there may be a moderate pleocytosis, (Usually lymphocytes but occasionally polymorphonuclears).

Where exposure has been chronic radiological examination reveals as an almost constant finding, heavy bands of increased density at areas of growth of the long bones (metaphyses) and along margins of the flat bones, such as the iliac crests. X-ray films of abdomen may show small flecks of radiopaque material (lead) in the gut.

(4) DIFFERENTIAL DIAGNOSIS

Acute lead poisoning may simulate a surgical abdominal condition. Both the acute and chronic forms may simulate poliomyelitis, localized neuritis or polyneuritis and rheumatic fever. In children especially lead encephalitis must be differentiated from other forms of encephalitis, subdural hematoma, brain tumor, brain abscess and meningitis, particularly tuberculous meningitis, uremia and encephalopathy with nephritis. The leadlines in the bones may be similar to those produced by bismuth or other heavy metals. When there is glycosuria associated with encephalopathy, the possibility of diabetic acidosis must be eliminated.

(5) TREATMENT

Removal from lead exposure and therapy with calcium EDTA will more often result in a favorable outcome if instituted early.

Treatment is with calcium disodium versenate (ethylenediamine tetra-acetate-EDTA), which is a safe and effective chelating agent that binds the lead into a nontoxic complex easily excreted in the urine. The child should be well hydrated before treatment is started. The drug is then given parenterally (intravenously) for three to five days, discontinued for two to three days, then given again for another three to five days. Standard dosage should not exceed 0.5 gm. per 35 pounds of body weight daily. Recently we have been removing the lead from the bowel by enemas before starting versene treatment.

Infection also interferes with deposition of lead in the bones and consequently must be controlled. Resolution of lead lines is a slow process and may take five months to several years.

Lead colic, an uncommon manifestation of lead poisoning in children, may be controlled by the use of antispasmodics and by intravenous administration of calcium salts.

The treatment of infants and children with lead encephalopathy has been universally unsatisfactory up to now. Treatment is divided into three parts: 1) the control of convulsions, 2) the reduction of increased intracranial pressure, and 3) the removal of lead from the body. The convulsions are difficult to control with the usual sedative drugs (such as intravenous phenobarbital), and may require general anesthesia.

In mild cases of encephalopathy it may be possible to control the increased intracranial pressure with frequent lumbar punctures. In severe cases, these measures will be inadequate to reduce the increased intracranial pressure and surgical decompression and hypothermia may have to be carried out. McLaurin and Nichols have advocated extensive bilateral decompression of the cranial vault to combat severe lead encephalopathy.

In 1952, Bessman, Ried, and Rubin first reported the successful use of EDTA in lead encephalopathy in children. Bessman, Rubin and Leikin reported the successful treatment of six out of seven children with lead encephalopathy with no toxicity from the drug; the child who died probably was treated insufficiently, having received only 0.5 gm. of EDTA. The authors also presented evidence that EDTA allows lead to be removed from the patient even during the severe phase of encephalopathy without causing an exacerbation of the symptoms. Karpinski, Rieders, and Girsh concluded that EDTA is highly effective in mobilizing lead *In Vivo* and in causing rapid excretion of lead in urine. They reported there were no toxic signs accompanying the mobilization and excretion of lead by EDTA.

Of special therapeutic importance is the control of infection and the resulting complicating acidosis which will tend to precipitate further attacks of encephalopathy by mobilizing lead from the storage depots. In the presence of encephalopathy and reduced renal function, corrective parenteral fluid should be administered with caution as the cerebral edema may be intensified. Fluid administration should be merely sufficient to keep the patient from becoming dehydrated.

Some investigators have advocated the use of repeated courses of EDTA during the convalescent phase following initial clinical recovery in an effort to prevent continuing lead toxicity to cerebral tissue.

Retreatment. The initial course of therapy may eradicate the clinical manifestations of lead poisoning, even while lead remains in the bones. The residual lead is often liberated gradually and excreted without renewal of symptoms of toxicity, but the reverse may be the case, especially with intercurrent infection. The necessity for treatment will depend upon a significant rise in the concentration of lead in the blood and the return of manifestations of toxicity. Close observation for long periods of time is essential for prevention of additional damage to the central nervous system.

(6) PROGNOSIS

Prognosis depends on severity and duration of illness. Spontaneous recovery is possible if the patient is removed early from the source of lead. But, if the lead ingestion continues, there will be a marked involvement of the brain with death or at least considerable damage, manifesting itself especially in the form of behavior disturbances, mental deficiency and recurring convulsions. The usual mortality for all kinds of lead poisoning in children is about 25 per cent. Children who die almost always have severe encephalitis. Important neurologic sequelae, including paralysis, blindness, and organic brain damage with resulting impairment of visual motor function and language skills, occur in 25 to 75 per cent of cases. Recurrences are correlated with continuing pica.

Counseling directed at cessation of pica is an effective tool in the prevention of continued lead poisoning. Education of the public, inspection and repair of substandard housing, and more stringent laws regarding lead-containing paints are other important measures in prevention. There is no law against the use of lead house paint in most of our states. One or two states have passed such laws. New Jersey and Michigan have laws requiring the landlord to repaint the house if a child gets lead poisoning, but you have to prove that the child got lead poisoning there before you can get the house repainted.

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THE PEDIATRICIAN'S ROLE IN ADOPTION

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The Pediatrician and the Adoptive Family

A pediatrician's initial contact with an adoptive family is frequently the day of placement when he is asked to examine the baby in order to assure them of the infant's health. The parents are often so excited at this time that it is difficult to become more than superficially acquainted with them. As the contact continues during the early weeks of the baby's life, it becomes quite apparent that even though the mother has not experienced pregnancy, labor, and delivery, she may be quite exhausted. The biological experience of pregnancy apparently serves to prepare a woman psychologically for her role as a mother. The adoptive mother becomes tired while learning to cope with the new experience and responsibility. With the increasing trend to place infants at the age of a few weeks, the adoptive parents may have only a few days to prepare for the baby's arrival. Many adoption agencies suggest that adoptive families who are financially able, employ a baby nurse for the first few weeks while the mother develops her own skills. Other agencies feel that such nurses with their "super skill" may intensify the mother's feelings of inadequacy. The public health nurse, whose services are often overlooked in adoptive placements, can offer helpful care during these early weeks.

Adoptive parents frequently present a somewhat unique quality in the expression of their anxieties about the baby. The usual inquiries of the new mother dealing with skin rashes, loose stools, mucous in the throat, fussy periods, and the like, are asked with a concern which indicates a sense of inadequacy. When a baby is not getting along perfectly, many adoptive parents feel that it is a reflection of their capacity as parents. For example, a mother of a three week old adoptive infant said, "I really wasn't worried about the baby. I wanted to come to see you because I hoped you would tell me that I was doing all right."

Adoption workers are concerned with improving their professional service during these early months. The social worker's follow up visits, established to give support to the parents in their new role, are often misinterpreted by adoptive parents as a means of checking on their adequacy. An adoptive mother recently told me, "The social worker comes once a month . . . to see if I feed her well and keep her clean; . . . to see if I'm a good mother, of course." Social workers and physicians would do well to discuss their respective roles during the early weeks of adoptive placement.

As the infants grow older, every day experiences such as constipation, thumb sucking, diaper rashes, night awakening, and the minor illness, which create feelings of exasperation in the stablest of parents, may evoke unusually severe discouragement among adoptive parents. A pediatrician soon becomes aware of the intensity of these feelings, and takes extra care to help the parents understand that these are some of the usual events of infancy.

As adoptive children grow in maturity, they may have many areas of psychological sensitivity. Hospitalization, with its incumbent separation from home and family, can be more frightening to the adopted child, who has grown up with the knowledge that "mother got me from the hospital." A child who spent his early years in an institution, may be particularly sensitive to hospitalization, for it can reawaken feelings of having been deserted by his own family. Pediatricians need to reassure every hospitalized child, and particularly, the adopted child, that he will return home as soon as he is well enough to leave the hospital.

Adoptive parents often need help in telling a child of his adoption. Many couples find it difficult to discuss the fact with their children. The fear of being unable to answer some of the child's questions about his own parents is a very real one, since

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inevitably a child wonders why his own parents were unable to keep him. A pediatrician can be helpful by pointing out to the adoptive parents the importance of communicating this basic information at an early age (for example at four or five). Secure in his relationship to his adopting parents, a child can accept the idea of adoption, just as he accepts many of the other facts of the world about him. Growing up with the feeling that, regardless of how he arrived in his present home, it has served the necessary psychological and physical role of a family, he remains secure in his child-parent relationship. Discovering the fact of adoption for the first time at a later age, particularly in the midst of adolescent turmoil, can be a very traumatic psychological experience.

With the increase in professional service provided by adoption agencies, many couples will have the opportunity to clarify their feelings about these problems prior to placement. The couple may, however, feel freer in their discussion with the physician since he is in no way involved with the placing of the child.

The Pediatrician and the Adoption Agency

Many adoption agencies utilize the professional service of a pediatrician. It is usual to request a medical examination of the baby prior to the final decision as to choice of adoptive parents. The physician's responsibility is to offer a clinical impression based on the genetic history available, the history of the pregnancy, the perinatal experience, and the findings upon examination of the infant. When the history and examination is within normal limits, the physician can state that there is a reasonable expectation for normal development.

While evaluating a baby prior to adoptive placement, a pediatrician may find that there has been considerable stress at birth. Examination may reveal equivocal signs, such as unusual irritability, poor sucking ability, moderate hypertonicity, and a high pitched cry. The physician should describe his findings and urge following up his examination with pediatric and developmental examinations at a later date. The adoption agency, not the physician, evaluates whether any given couple can and should accept the risk of possible neurological damage. One must keep in mind that each infant placed for adoption, just as each baby born to a couple, bears the risk of not being perfect. This risk is involved in all parenthood, adoptive or natural.

With the increased interest in the placement of children with congenital anomalies, the consulting pediatrician is responsible for interpreting to the agency the nature of the medical and surgical treatment involved in the care of the infant. An adopting couple's capacity to handle the additional financial and psychological responsibilities of prolonged care can be adequately evaluated only when the social agency has a clear understanding of the extent of the necessary treatment. The responsibility of six months of orthopedic care for an infant suffering from a foot deformity may be well within the capacity of many adoptive couples. The same parents, faced with a more serious congenital defect, such as cleft palate and hare lip, may find it to be more of a financial and psychological burden than they can handle with equanimity. Some agencies have the resources to assume much of the financial responsibilities for infants who are placed needing prolonged care.

The decision to place an infant with congenital anomalies is a serious one. Both physicians and social workers must work together to bring about a successful family relationship. The agency depends on the pediatric consultant to acquaint them with "what it takes" for a parent to care successfully for a child needing prolonged treatment.

Early Placement

The early placement of infants is gaining increasing support among adoption agencies so that many babies are now being placed directly from the newborn nursery. Whatever risk is involved in the possible failure to recognize a defective or minimally damaged infant, most adoptive parents feel that there are advantages in initiating the parent-child relationship in the first weeks of life. In addition, the infant is spared the potential danger of inadequate care in an institution or foster home.

Pediatricians, who serve as consultants to institutions caring for infants and children, have an obligation to insist on the presence of sufficient staff to provide care for each child. The work of Bowlby, Spitz, Freud and Burlingham, and Provence and Lipton, clearly demonstrates the sensitivities of babies to a lack of adequate mothering during the early months of life. Many infants have suffered permanent damage while being "observed" in an institution with insufficient staff to provide suitable care.

The Natural Mother

Pediatricians often have some relationship with the natural mother. One of the most frequent contacts can occur on the obstetric floor when the mother planning to place her infant for adoption asks to see her infant. Hospital rules and professional attitudes often interfere with facilitating the mother's wish to see her infant. A woman has the right to see and handle the infant she has conceived, carried, and produced, no matter what her plans are for the baby's care. Many women are relieved to see that their infant is a healthy normal baby. On the other hand, to force a woman to see or handle an infant when she does not wish to do so can be brutal punishment inflicted by the very people whom she has relied upon for professional help. The decision as to whether a woman should see and handle her infant should be worked out on a flexible individual basis. It cannot be a routine procedure based on hospital policy, or professional attitudes of medical personnel in administrative positions. Even if handling the infant appears to postpone the mother's decision to place the baby, it is better than to have her forced into a decision arrived at without careful deliberation and thought. The all too frequent scene of a distraught mother, scarcely recuperated from the exhaustion of the delivery, being forced to sign a release for an infant, has no place in current medical practice.

Another contact with a natural mother may occur when a girl (with or without her parents) may seek medical advice from her former pediatrician when pregnancy is suspected. Of the 1258 unwed mothers reported in Connecticut in 1957, 96 were 16 years of age or under. It is quite natural that some of these girls and their families turn to their pediatrician for assistance.

The suspected diagnosis of pregnancy must be proven correct. Many girls have irregular menstrual cycles which are strongly influenced by psychological stresses. Once the diagnosis is established by means of appropriate examinations and laboratory studies, the pediatrician is in a key position to help the patient obtain necessary medical and psychological services. The pediatrician must be on guard lest the family tensions interfere with careful thoughtful planning involving the girl and her family. Even if the parents have been unable to provide consistent emotional support to their daughter, the fact that they have come with her to the pediatrician brings them immediately into the planning. How much of a role the pediatrician assumes in arranging for care varies according to the community resources and the physician's interest and skill. Most pediatricians are relieved to be able to refer the family to a social agency which can offer professional service to both the patient and her family, including help in planning placement for the infant if this is agreed upon by all concerned. Fortunately in Connecticut, any family is not too far from a Family Service Agency, or Division of Maternal and Child Health of the State Health Department where appropriate case work services can be arranged.

The process through which an unmarried woman arrives at a decision to place her infant for adoption is a long and difficult one. Most physicians have neither the time nor skill to help the patient arrive at a logical plan for herself and her infant. It is particularly important that the patient have a relationship with some professional person after delivery, so that she can be helped to reorganize her own resources so as to lead a more effective life.

Physicians are quick to recognize, and at times to criticize, inadequacies in social work agencies. With the increase in case loads subsequent to the new adoption law in Connecticut in 1959, agencies offering services to unmarried mothers and couples seeking to adopt may find it difficult to maintain the desired standards of professional service. As public citizens, physicians have an obligation to lend their support towards improving these agencies, rather than to criticize them for failure to provide the services desired.

International Adoptions

Many pediatricians have been approached by couples seeking advice concerning the adoption of children from abroad. Although this process brings a homeless child to a childless family, there are many complications in transporting children from war-torn areas abroad. Strange to our culture and the English language, such children, many of mixed racial descent, may arrive suffering from long-standing nutritional and psychological deprivation as well as parasitic and other diseases. These frightened and deprived children need particularly mature and stable parents, who can in spite of marked cultural and physical differences, respond with warmth and flexibility. In return parents can achieve great satisfaction as the child gradually becomes part of a family unit. International Social Service,* in cooperation with local adoption agencies, provides an outstanding service in arranging such placements after careful evaluation and preparation of the adopting couples as well as the study of the child abroad.

Proxy Adoptions

Many couples, impatient at what seems to them to be inordinate delay in an agency evaluation process, or unhappy at being rejected by an adoption agency, seek to obtain a child through "proxy adoption."

This is a process which arranges the adoption of a child in one country by parents residing in another country. The adopting parents are represented by a proxy in a foreign court. Actually, it means legalizing a parent-child relationship sight unseen.

Such procedures are quite undesirable. The termination of parental rights in a foreign country deserves serious consideration. It is unwarranted to uproot a child from his native land and culture, transporting him to another country, unless the new environment can provide potentialities far better than where he is. A malnourished, frightened, uncommunicative Korean waif of mixed racial ancestry is quite different from the blue-eyed blond child so often sought after by couples seeking to adopt. Many families who have obtained children through proxy adoption have found the experience so disappointing, and even unbearable, that the children have suffered cruel treatment and welfare agencies have had to intervene in order to protect the child's health. Actually, the transport of children across thousands of miles of land and sea, when neither the adopting couple nor the child have been carefully evaluated or prepared, is reminiscent of the archaic practice of selling children as slaves. It is of interest that the Army, Navy, Air Force Journal, on January 4, 1958, spoke out against proxy adoption, urging careful studies of the families and children through International Social Service and other cooperating agencies. These social agencies have had long experience in bringing together children and families and in preparing adopting couples for the complications inherent in the placement of children from abroad.

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* International Social Service, 345 East 46th Street, New York, New York.

Summary

Consideration of the various aspects of adoption reveals that a pediatrician has a professional role in many diverse areas. He may serve as a pediatrician to an adopting family; as a consultant to an adoption agency; or as the person to whom a young unmarried expectant mother turns for professional advice as to how to obtain adequate professional care. In addition, the pediatrician should become a leader in his community to improve the health and welfare agencies serving the needs of various individuals involved in the adoption process, namely the baby, the natural parents, and the couples seeking to adopt children.

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COSMETICS:

The Dermatologist's Responsibility To The PRODUCT, The PATIENT, And The PROFESSION

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SYNOPSIS 2

The cosmetic formulations described in section 1* are presented as dermatologicals. They are classified into an "inactive" group whose use is for adornment only and into an "active" group wherein the product contains ingredients added to intentionally alter the structure or function of some part of the skin or its appendages. The dermatologic hazards associated with large scale use of these products are explained and troublesome ingredients are identified. The methods used for prophetic pretesting of cosmetics for irritation and sensitization potential are prescribed in detail and the limits of confidence that can be placed in these tests are established.

Now we can discuss cosmetics more from a dermatological standpoint. I stated that the dermatologist classified these materials into non-reactive cosmetics and active cosmetics. Table 2 lists the non-reactive cosmetics, and their adverse clinical signs, and the active cosmetics and their adverse clinical signs. In the first group, the only adverse clinical sign that one might see would be either local irritation or allergic sensitization following use. The materials that may be classified as non-reactive are the cleansing and emollient creams and lotions, pastes, powders, and rouge, foundations and eye make-up (eye make-up incidentally, contains only mineral pigments), shaving soaps, creams and lotions, wave-set and hair grooming agents, bath preparations, soaps, salts and oils, nail polish removers and nail lacquers, when they do not contain additives designed to alter the nail structure. Nail lacquers and removers are quite safe as long as they are made of pure nitrocellulose solutions. It is only when they try to add something that will actively affect the nail that problems come in. The recent alarm about PVP, or polyvinylpyroladone, which is the basic ingredient in many hair lacquers, causing granuloma of the lung after inhalation, has been allayed,[4] so that this group of materials can continue to be used. Actually, PVP is the German plasma substitute developed during the war, and, if it were to produce granulomas, it seems likely that they would have shown up long before now.

Now, the ingredient in these so-called non-reactive cosmetics that causes most of the trouble, from a dermatological standpoint, in other words, the sensitizer, is most frequently the fragrance. Fragrance is a component of all, and a necessary component, because cosmetics in the raw are not very pleasant. But, complicating the fragrance picture is the fact that there is no such thing as a simple perfume. Cosmetic fragrances are made of plant oils which may be either essential oils, i.e., expressed or distilled, or flower oils, which are pressed from the flower, or oils derived from rosins and gums, or exudates of plants. Additionally, cosmetic fragrances contain animal secretions, the most commonly known one being musk; and to this must be added the chemical substances. These may be chemical isolates or derivatives from plant materials, or synthetic organic substances. Unfortunately, as the chemistry of perfume substances becomes

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* *Connecticut Medicine,* November, 1960, p. 673.

Table II
Classification

NON-REACTIVE COSMETICS	ADVERSE CLINICAL SIGNS
Cleansing and Emollient Creams and Lotions	local irritation or allergic sensitization
Face Powders and Rouge	
Foundation and Eye Makeup	
Shaving Soaps, Creams and Lotions	
Wave Sets and Hair Grooming Agents	
Bath Preparations, Soaps, Salts and Oils	
Nail Lacquer and Removers	
Fragrance (component of all)	
Dentifrices	
ACTIVE COSMETICS	
Sun Tan Preparations	photo sensitization
Skin Lighteners and Bleaches	irreversible change pigment, systemic toxicity
Lipsticks	cheilitis, bromacid reaction
Antiperspirants and Deodorants	hydradinitis, granulomatoses
Shampoos and Antidandruff Preparations	conjunctivitis, irritation, systemic toxicity
Depilatories	folliculitis
Bleaches, Hair Colorings and Dye Removers	hair damage, dye sensitization, systemic toxicity
Permanent Waving and Straightening	alopecia and hair damage
Beauty Masks	counter irritation
Eye Lotions	may precipitate glaucoma
Finger Nail Builders	destruction nail matrix
Hormone Creams	local edema, no systemic effects

better known, more variations are introduced and the fragrance itself becomes much more complicated. The public demands it. The so-called "identical" floral note, which has existed since Victorian times, was then made with 13 basic oils. Today, this same fragrance contains 45 basic oils. It is extremely difficult to predict which of these oils will be a specific sensitizer or irritant in any particular individual, and there seems to be very little hope that the fragrance as such will ever become less complicated.

Moving on to the so-called "active" cosmetics, we find materials that are active because of an ingredient that is incorporated to "do something." The first listed are sun tan preparations. These products, from the standpoint of adverse clinical sign, are often photosensitizers. They contain chemicals which absorb the harmful rays of the sun. The typical chemical for this purpose is paraminobenzoic acid, or esters therefrom. Unfortunately, these materials also frequently cross-sensitize an individual to the "caine" series of local anesthetics, or to the sulfa drug group, so that one can get cross-sensitization in addition to the photosensitization from sun tan preparations.

Next listed are skin lighteners and bleaches. Here, one may produce an irreversible change in the pigment, due to damage to the enzyme system of the pigment cells. Also, one can obtain systemic toxicity. Formerly, skin lighteners and bleaches were compounds of mercury. Now there is a tendency to try to obtain the same effect by using organic materials such as some of the antioxidants and accelerators that are used in the rubber industry. For example, the prescription item Benoquin contains hydroquinonemonobenzyl ether, one of these antioxidants. These organic materials are frequently sensitizers and also the possibility of systemic toxicity is perhaps as great as it ever was with the mercury. The amount of mercury present in skin lighteners is definitely fixed by law, so as not to exceed something in the nature of five per cent. The monobenzylether of hydroquinone is used clinically in 10 per cent to 33 per cent concentration.

Lipsticks are active cosmetics and they do produce a cheilitis. This is fundamentally a brom-acid reaction because it is due to the combination of the dye with the protein of the mucous membrane.

Anti-perspirants and deodorants, generally speaking, produce either hydradenitis or granulomatoses when they cause trouble. This effect is due to occlusion of the apocrine orifices through the action of the astringent ingredient, which is most often aluminium chlorhydrate, or another aluminium salts, or alum.[5] Recently salts of zirconium have been used, and I think we are all quite familiar with the granulomatous effects.[6]

The shampoos and anti-dandruff preparations, because they are made with mixed detergents, frequently can cause eye damage. The problem here is conjunctivitis or irritation. Usually these products have been screened sufficiently well so that they will not produce more serious eye damage than this, although in the past there have been cases of blindness presumably caused by shampoos. The other thing to look for from the shampoos is systemic toxicity due to absorption of some of the detergent agents that are used in their formulation. Of course, to be anti-dandruff, usually these materials have an added germicide which, generally speaking, falls into the phenolic group of antiseptics. This ingredient, too, can be toxic when absorbed.

Depilatories are almost exclusively calcium thioglycolates today, and about the only side effect that one can get from them is a folliculitis due to destruction of the hair within the follicle, plugging of the follicle, and then secondary infection following irritation.

Bleaches, hair-coverings, and dye removers were discussed under "Pigments." The thing that one notices first is hair damage; secondly, dye sensitization; and thirdly, possibly systemic toxicity. There has been at least one legal case of systemic toxicity attributable to ingredients of hair dye, notably the paraphenylenediamine of the hair dye.

Permanent wave materials and hair strengthening materials are, generally speaking, thioglycolates. They are used to soften the hair before its contour is changed. The secondary effects that will be noticed by us will be alopecia or some other type of hair damage. The damage is usually not permanent.

Beauty masks contain counter-irritants. Formerly these were derivatives of salicylic acid; now they are nicotinic acid esters. These ingredients do apparently penetrate through the skin and stimulate the blood vessels beneath. The flush reaction is presumably beneficial cosmetically and usually is of no great moment.

Eye lotions are another thing. The quantities of active ingredients that are permitted in products on the market might actually precipitate serious eye trouble, e.g., the induction of glaucoma in a marginal case. The cosmetic appeal obtained from an eye lotion is from its ability to cause dilatation of the pupil, and even slight dilatation might conceivably be sufficient to cause real trouble. These products are regulated very closely and they do meet stringent safety requirements.

The fingernail "builders" too are troublemakers, because here one occasionally obtains destruction of the nail matrix. When a product is supposed to add something real to the nail, it should probably be avoided.

Hormone creams are the last on the list. These materials happen to be my own special interest. They do definitely produce a local edema in the cells of the epidermis. They do have—perhaps they are the only things that do have—a proliserative effect upon epidermal cells, but this is as far as their action goes. In the concentrations used, at any rate, there are no systemic effects whatsoever; in fact, it may be doubted that enough of the hormone is ever absorbed through the skin to be even definitely detectable.

Now, the question comes up, how can we as dermatologists properly state that a product is as free from potential damage as it can possibly be made? For this purpose, we must demand pre-testing of all ingredients that enter into the compounding. The final formulation itself must have at least been cleared through animal toxicity tests. But, even so, we come to the final formulation that presumably is so pure that the only thing it can do is possibly induce an irritation or a sensitization reaction. In this respect, we can say almost only sensitization, because the irritation potential should have been eliminated by the pre-testing. The ingredients have been studied for safety. Those ingredients that are active in the cosmetic have been introduced only within limits that have been specically set forth as safe for their use, so that the only problem we as physicians should have with formulated cosmetics is to predict whether the particular formulation will prove to be a sensitizer in too many individuals. This is what we are dealing with when we speak of the "prophetic" patch tests for determining safety in use of a product.

Ideally, a prophetic test should be able to predict, from study on a relatively small use panel, just what the chances are that someone in the general public who eventually uses the particular cosmetic product will develop a sensitization. By use of patch test techniques, several of which I shall discuss, we do our best to make a reasonable estimate of these chances.

The patch test consists of an occlusive patch which is retained on the skin for a definite period at specfiic intervals. The patch itself usually is cloth with impervious backing attached to adhesive tape. The test material is applied to the patch in appropriate concentration (with cosmetics, the existing product is used) and then to the skin. The occlusive patch is retained in place for 48 hours and subsequently read. Mathematically and statistically, a prophetic test for prediction of sensitization is a virtual impossibility, for, if one were to consider patch testing on a statistical basis, in order to be reasonably sure that less than 100th of one per cent, or one person in 10,000, would respond adversely to the use of the cosmetic, one would have to test 30,000 individuals and get no reactions (Table 3). Obviously, this is an impossible situation before a material is put on the market, although, frankly, in actual practice, as soon as an item is sold it does reach this range. But from the

TABLE III

STATISTICAL CALCULATIONS

Maximum Anticipated Reactions in General Public from Analysis of Prophetic Patch Test Data

TEST POPULATION (SAMPLE SIZE)	NUMBER OF POSITIVE REACTIONS IN TEST NONE	ONE	TWO
30,000 individuals	0.01%		
10,000	0.03%	0.05%	0.06%
5,000	0.06%	0.09%	
1,000	0.30%	0.45%	
200	1.5 %	2.2 %	2.9 %
100	3.0 %	4.4 %	5.8 %
50	5.8 %	8.8 %	
20	13.9 %	20.8 %	27.0 %
10	26.9 %	38.2 %	

Modified from Henderson, C. R. and Riley, E. C.

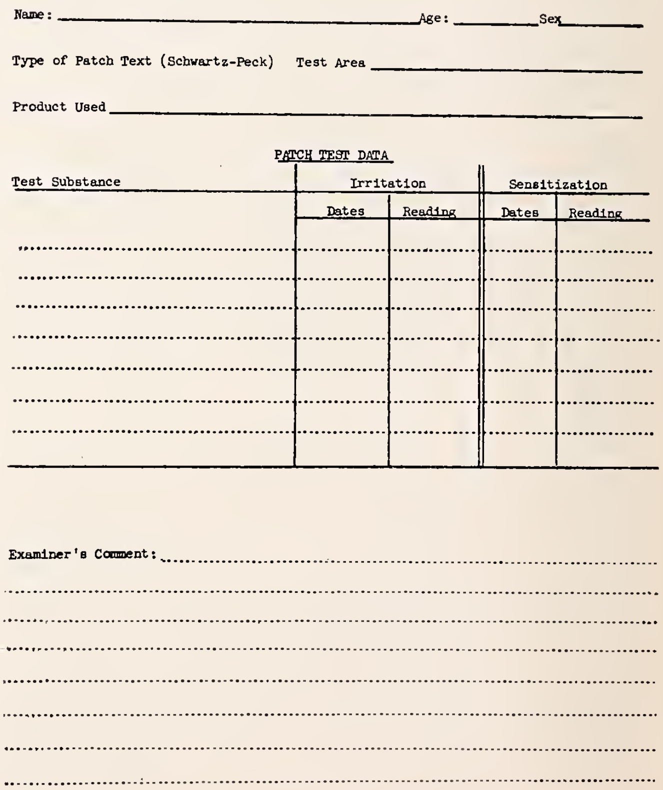
standpoint of pre-testing materials, a much more reasonable number of individuals must be used. The conventional number that should properly be used, or was recommended during the war for use, is 200 individuals, and, using 200 individuals, if no single one responds adversely, then one can reasonably expect that no more than 1½ per cent of the general population will show a sensitization reaction. If, on the other hand, as shown by the chart, there is one adverse response, then 2.2 per cent of the population will respond; or if there are two adverse responses, approximately three per cent of the population will respond.[7] So, from the standpoint of the patch test, if, in a cosmetic material, there is more than one reaction from 200 individuals, the material would probably not be safe for use by the general public. Now, we're speaking of "general public"; you will all recall Dr. Sulzberger's work with allergic patients, which showed that individuals with eczema reacted much more frequently to sensitizers than did normals. In his series, some 92 per cent of the eczema patients developed sensitization, while only 53 or 54 per cent of the non-eczema patients developed sensitization to the same insult.[8] This difference is not necessarily limited to eczema patients. If one alters the skin so that it is no longer intact when the patch test is applied, one can also produce an increased rate of sensitization to some sensitizing chemicals. Traub and I showed this clearly for certain dermatologicals through the simple process of scarifying the skin before application of the test material on the conventional patch.[9]

The conventional patch test is that more or less standardized during the last war, and perhaps properly known by the names of its originators as the "Schwartz-Peck test."[10] In this test, 200 individuals have a 48-hour "patch" of test material applied; skin reaction readings are made; then, after a two-week interval, the test patch is reapplied for another 48 hours to the identical site or as close as possible to that identical site and the readings again made. Generally speaking, those reactions that are seen on first application, in other words, the first 48 hours, are considered to be possibly irritation reactions. The real significance of the patch test lies in the difference between the 48-hour readings of the second series and those of the first series; in other words, if there is an increase in the number of individuals in a patch test panel who show reaction on second application over those who showed any type of reaction on first application, that difference, if greater, is indicative that the material tested possibly may be a sensitizer.

The conventional Schwartz-Peck test, when properly done, will indicate sensitizers, but it frequently is not sufficiently severe. It "misses" if one uses a panel of only 200 individuals because with even reasonably safe products the Schwartz-Peck panel should be entirely negative. Consequently, many attempts have been made to develop a more drastic test. The original sensitization test used on animals was the Landsteiner-Draize intradermal insult. This consisted of multiple insults obtained by injecting guinea pigs intradermally every day for nine injections, then allowing a 10-day to three-week interval, and reinjecting the guinea pig at the same site. If there was a tissue reaction either during the induction series of nine days, or after the so-called "sensitization lag" 10 days, the material was said to be a sensitizer. Currently, the Food and Drug Administration is of the opinion that before a cosmetic material should be cleared for sale, it should not only pass satisfactorily the Schwartz-Peck patch test panel but also should be used on a number of humans in a test comparable in severity to the beforementioned guinea pig intradermal. The so-called "multiple insult" test of Draize-Shelanski is a severe test of this type. Now, this test is, in timing and theory, exactly the same as the original Landsteiner guinea pig test, except that, instead of the material being injected intradermally, it is to be applied repeatedly by patch test. Each patch is allowed to stay on for either 24 or 48 hours, depending upon the technique. In my own work, when I run a multiple insult patch test, I apply patches for 48 hours, reapplying fresh material with

FIGURE 4.

IRRITATION—SENSITIZATION PATCH TEST



Name: Age: Sex

Type of Patch Text (Schwartz-Peck) Test Area

Product Used

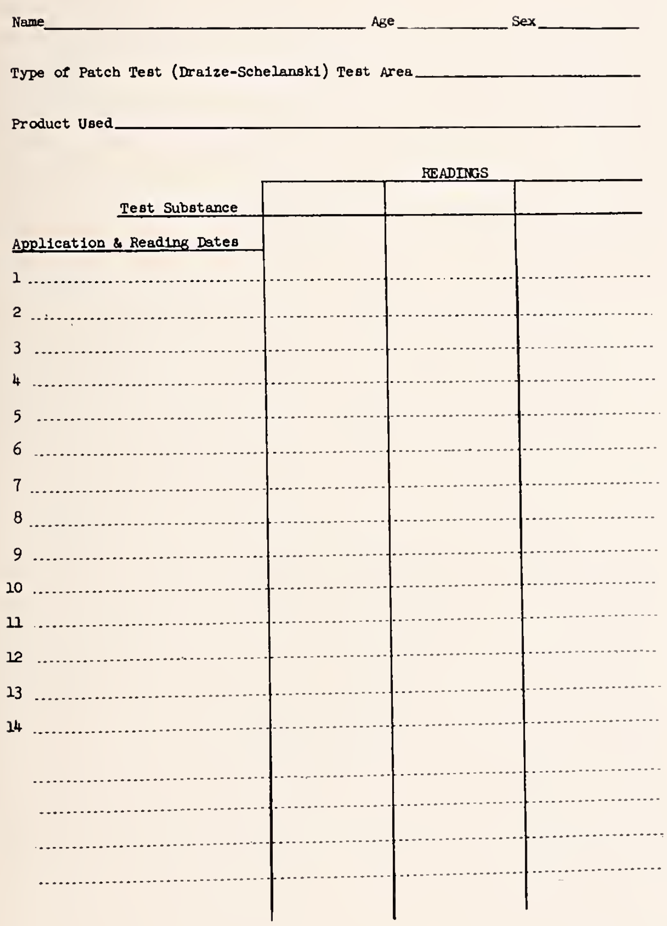
PATCH TEST DATA

Test Substance	Irritation		Sensitization	
	Dates	Reading	Dates	Reading

Examiner's Comment:

FIGURE 5.

MULTIPLE INSULIN PATCH TEST



Name__________ Age_____ Sex_____

Type of Patch Test (Draize-Schelanski) Test Area__________

Product Used__________

	READINGS		
Test Substance			
Application & Reading Dates			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

each change, so that over a period of nine applications, one consumes approximately three weeks' time. I allow a short period for development of sensitization, usually another week or ten days, and then apply another 48-hour patch. Now, this test is extremely rough on the subject. As a consequence, subjects who will permit the repeat insult type are quite expensive. A great deal of the work currently is being done in prisons, I believe, but I personally use no one except the paid volunteer, and I do not use 200, because the price is exorbitant. My standard technique is to use between 25 and 50 individuals on the multiple insult patch test, and a 200-individual panel on the Schwartz-Peck test. I usually combine the latter with a product use test in order to obtain a simultaneous clinical trial. Those in charge of evaluating these safety data like to have the original protocols, so that, for this purpose, I have prepared mimeographed sheets upon which I record all data (Figures 4, 5). These sheets are submitted to the authorities. Concrete data of this type takes any doubt out of the physician's statement, because the record is authenticated. Quite often today, the request is made for the raw data, and no interpretations, because the authorities feel that they are sufficiently well staffed, and certainly well enough qualified, to make the decisions. I make it a rule that the data that I submit on the patch tests are original records on mimeographed sheets. Additionally, I only work with paid volunteers. As I say, the numbers that are used are usually 200 for the straight Schwartz-Peck test and 25 to 50 for the multiple insult. Now, it is hard to justify the expenditure of money that this takes for any company, regardless of how large, because, after all, the cosmetic companies only function on perhaps a 5-10 per cent margin, and even though the price is only $5,000 for a patch test series, that $5,000 represents five per cent of $100,000, so that the potential market for the sale of the product being tested must exceed $100,000 before the expenditure can be justified.

(This is the second of a series of three articles.)

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Editorials

Things To Come

> "While sectarian and partisan faiths are based on personal choice or temperament and divide men, scientific procedures unite men in something nobly devoid of all pettiness. Because it requires detachment, disinterestedness it is the finest flower and test of a liberal civilization."
>
> —*Morris Cohen and Ernest Nagel in Introduction to Logic and the Scientific Method.*

Twenty-five years ago most practising physicians in Connecticut received Vol. 1, Number 1 of *The Connecticut State Medical Journal.* Its purpose was to increase the contact of the members of the society with each other and with the society itself. But it was more than this, it was also to signal the new developments and new knowledge in medical science for it must be obvious to anyone that medicine depends upon a skillful application of knowledge.

Now that we have reached our 25th Anniversary it is fruitful to stand aside and take a look at what has come to pass. What have we learned? Where are we and where are we going? Such an adventure can well help to shake us out of our habitual beliefs. The doubt will become apparent as we observe alterations that have occurred in our familiar environment. Taking a hard look at the past and present will re-arouse our curiosity, without which we either do no thinking at all or else our thinking such as it is assumes only a routine character.

Until about the time our Journal was founded we were all virtually in a long period of therapeutic nihilism although some knowledge of endocrine function and regulation was already being actively explored. Insulin was available but how it acted and what caused its liberation was not understood. Nevertheless the ground for scientific therapeutics was being laid in a negative way by slow discrediting of hundreds of inert and outmoded agents. Almost with the founding of our Journal a number of effective and amazingly specific drugs and chemicals began to appear and thereby altered the entire picture of human disease. It is purely a coincidence, that the founding of our Journal and the great era of scientific therapeutics occurred at about the same time. But how fortunate it was for our readers and their patients.

What has been reflected in the pages of our Journal? All medical progress. By 1937 the value of the sulphonamides one after another ushered in the era of the conquest of infectious disease. New vitamins were discovered. Vitamin K, nicotinic acid, riboflavin, pyridoxine, cyanocobalamine (B_{12}). Penicillin and its derivatives were produced and methods of administration and dosage worked out. Other antibiotics appeared in profusion. Streptomycin, tetracycline, chloramphenicol, erythromycin and numerous others with the end not in sight. What has the control of infections done to our society in prolonging life, increasing productivity, reducing absenteeism and orphans, increasing health and opportunity for happiness? What has happened to our concept of fever?

In 1935 Wendell Stanley first described and isolated the tobacco mosaic virus. Since then the ubiquitous nature of viral diseases of man have been elucidated, their ribo-nucleic acid content and their replication in cells visualized by the electron microscope and a new chapter opened in our understanding of the way cells reproduce themselves, how proteins are built. A brief glimpse into the very nature of the origin of life itself has been afforded out of which may come even the conquest of cancer. What is the significance of these advances to human weal and woe. This is a philosophical question and we hope to have something to say in forthcoming issues on this point.

Other revolutionary developments in surgery have had far reaching influences. Intravenous anesthesia and various adjunctive drugs, blood banking and preservation was developed. A steady advance has taken place in the knowledge of electrolyte balance, renal physiology. Tissue grafts and banks are now commonplace, so is invasion of the heart, kidney, brain, restoration of arterial integrity and a host of other undreamed of advances are now taken almost for granted.

A whole field of synthetic chemistry has yielded inconceivable and potent drugs affecting the nervous system and autonomic ganglia. Psychic depressants and energizers of all varieties are being presented to us. All of these have been reflected in the pages of our Journal and have had their repercussions in our patients and society as a whole.

1961, the 25th Anniversary of the founding of our Journal, should be a year of looking back and interpreting the meaning to us and society of the great medical advances. In this sense some articles to appear will be contemplative and philosophical. 1961 will also be the beginning of new and even greater advances which will make past progress almost elementary. The Journal will be the instrument through which the hard-won knowledge gained in the laboratory and the clinic will be offered to our readers. We will do this more with humility than pride constantly working towards greater usefulness of our pages.

In 1936 all the subsequent progress which took place seemed impossible. The next twenty-five years should produce more impossible things and if—

> "One can't believe impossible things" "then" "I daresay you haven't had much practice" said the Queen.
>
> "When I was your age I always did it for half an hour a day. Why sometimes I've believed as many as six impossible things before breakfast"—Lewis Carroll, Through the Looking-glass.

If the forces which divide men will weaken, as we all must hope and pray that they will and men become united through searching for truth through science, then truly will we have a world "Nobly devoid of all pettiness". With the hope that the Things To Come will be good for our society and all society, we begin the Silver Anniversary of our Journal with high confidence.

L.H.N.

The Saga of a Stapler

This is the saga of a stapler. This particular stapler is a complex surgical instrument designed to suture minute blood vessels and nerves impossible to be joined by human hands and conventional instruments.

The story starts in the Soviet Union four years ago when this writer was on an official mission in Moscow visiting research and teaching centers. The piece de resistance in surgical development in the U.S.S.R. was a stapling machine.

It was a complicated chrome instrument that used minute wire staples so small that without magnification they couldn't even be loaded. The instrument would stitch from two to 12 stitches automatically and accurately. This ingenious instrument had made possible organ transplantation at the Institute of Experimental Surgery. It was widely heralded throughout the world as signaling a new surgical era.

Surgeons and scientists all over the world were eager to obtain this magnificent device, and for three years both scientists and instrument manufacturers in the United States tried but were unsuccessful.

It took David Rose, an ingenious American builder, industrialist and philanthropist, to "deliver the goods." Through certain business connections, he was able to purchase the instrument in the Soviet Union for about $3,000. He sent an emissary to Moscow to deliver this surgical treasure to the United States.

STAPLES FINER THAN HAIR

It was a most complicated precision instrument consisting of more than forty parts using various sizes of staples made of a tantalum wire, which is finer than human hair.

While it took a matter of seconds to use the stapler, it took almost two hours to load, disassemble and clean the instrument. It was a great advance, but not too practical.

Obviously, the instrument was much too complicated for use in ordinary hospitals. For such use it had to be both practical and foolproof.

To study improvement and simplification of the device, Mr. Rose sought the counsel of an engineer friend, Dr. William Fondiller. Dr. Fondiller, in turn, called in another engineer, Dr. Rudi Mallina.

The result, after study, development and redesign, was a relatively simple instrument that can be prepared, cleaned and maintained by the usual operating-room personnel. It is just as efficient as the complicated Russian version and costs only a fraction of the original model.

RESEARCH IN JAPAN

In the near future the device should be available in the general surgical supply market and, hopefully, the lives of many patients suffering from certain types of heretofore inoperable cancer and many diseases of the heart, nerves, and blood vessels can be saved.

While the above was going on in the United States, research in suturing machines was also being done by Dr. Kiyo Shoinokuchi University of Fukuoka, Japan. For the last several months, Dr. Inokuchi has been demonstrating his instrument and has been consulting with leaders in a number of surgical clinics in Europe, another illustration of the internationality of medicine.

The saga of the stapler brings out two important points. First, a person-to-person relationship can often achieve what red-tape ensnarled official contracts cannot do. Second, it points up the need, frequently expressed by surgeons and other clinicians, for coordinating the science of medicine and the science and technology of engineering.

This has been done in such fields as prosthetics, but the surgeon with imagination who sees the possibility of a new and better way of doing a procedure does not have organized engineering research support available.

The components are all available—physicians, surgeons and medical scientists; surgical instrument designers and technicians; the scientific laboratories of universities and industries.

COMMITTEE ORGANIZED

As a first step toward meeting this need, a small committee recently has been formed. It is known as the Committee for the Establishment of an Institute of Medical Engineering. Mr. Rose is the chairman.

Other members include Theodore R. Miller, M. D., Associate Attending Surgeon at Memorial Hospital Center and Assistant Clinician, Sloan-Kettering Institute; Dr. Fondiller, former vice president of Bell Telephone Laboratories; Dr. Mallina, a member of the technical staff of Bell Telephone Laboratories; James J. Felt, chairman of the New York Planning Commission, and David M. Heyman, president of the New York Foundation and long a staunch supporter of medical research.

The purpose of the committee is to stimulate the organization of one or more institutes for medical engineering to which scientists, clinicians and engineers could send both ideas and instruments to be tested.

This approach could surely advance both our clinical and research program in medicine. It could truly become a life saver.

If an instrument can be born in Russia, redesigned and made practical in the United States, changed in Japan and service-tested in Europe—here, for sure, is internationality at work.

If the result of this experience is the establishment of a national institute of medical engineering and support of such programs in our great communities and industrial laboratories, we have made another stride in the conquest of disease.

* *By Howard A. Rusk, M.D., reprinted with permission of the author and of* The New York Times.

The Etiology of Leukemia

According to F. W. Gunz* studies of the etiology of leukemia have led to "remarkably few firm results." The disease, christened by Virchow in 1845, was regarded by him as infectious, a "suppuration of the blood." While shown to be erroneous this idea has been frequently resurrected, probably because infections of various kinds frequently accompany the disease, and while there is no question that viral infections may cause a leukemia picture in fowls there is no clear evidence that they can do so in man. In many leukemic patients the lack of *maturation* of the leucocytes has led to the theory that absence of some factor essential for leucocytic development may cause the disease. Improvement in patients with leukemia following transfusion seemed to support this possibility which was probably due, however, to the formation of excess cortisone. The possibility of an inhibitor of cell division, suggested by Osgood, is not supported by direct evidence. The view that leukemia is a form of malignant neoplasm has been widely held and its fatal termination, the cytology of the leucocytes, and its close relation to known malignancies of the lymphatic and hematopoietic symptoms lends support to this view. However, its extremely variable course, the absence of abnormal leucocytes in some types, and the lack of metastatic qualities, the changes being in the bone marrow, are against this view. The influence of racial, ethnic and environmental factors has been insufficiently explained and is obscure. The lymphocytic form does not occur in Japan and some other far eastern countries and is much less prevalent among the Bantus of South Africa than the granulocytic type. The influence of heredity in man is still in the debatable stage though multiple cases in certain families are reported and this field may be a fruitful one for future research. There is evidence in mice that estrogenic hormones are leukemogenic and that leukemia is commoner in females, but in man the disease is commoner in males, particularly the lymphocytic form. This is not true after middle age when the disease may be commoner in women. More investigation of the role of sex hormones is needed. There is no question that exposure to ionizing radiations may lead to leukemia in human beings and that it may affect those chronically exposed to small doses of x-rays, populations exposed to a single large dose of radiation and patients given large therapeutic doses of x-rays. Radiologists and dermatologists, patients, especially those given large doses of x-rays for rheumatoid arthritis, and populations closely exposed to atom bomb explosions all develop leukemia much more frequently than the general population. Benzol is the only chemical carcinogen at present known to be leukemogenic in man. In a pilot study of a small number of patients by Doctor Gunz he opines that a single factor is unlikely to be leukemogenic. Among the Japanese most heavily irradiated by atom bombs only 1 in 100 developed leukemia. In Doctor Gunz' small group 12.7 per cent gave a history of heredity as compared to 3.4 per cent of the controls. He admits that his group was much too small to permit firm conclusions and that much further research is needed.

G. B.

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* Bull. Tufts-New England Med. Center, 1957, 3: 3, pp. 121-145.

Measurement of Myocardial Blood Flow

The character of the coronary arteries of man are known only from the effects which they produce. Even so, objective evidence are not easy to come by since as many as 75 per cent of true cases of angina are accompanied by normal electrocardiograms. An exercising electrocardiogram might reveal transient changes or it might not and the subjective signs of coronary insufficiency such as pain and dyspnoea could as readily be due to pulmonary disease or myocardial disease in the presence of normal coronary arteries.

We need an accurate method of establishing in quantitative terms the amount of myocardial blood flow. This is especially urgent now since it is possible by means of arterial grafts to by-pass or eliminate segmental arterial obstruction. The literature is full of cures of peripheral vascular disease, cerebral arterial insufficiency and reno-prival hypertension by arterial grafting. We are now in a very favored position since the need is clear, the method of cure is available, all that is necessary is an accurate method for quantitating coronary blood flow and at the same time establishing the segmental nature of the obstruction. Up to the present time the methods of measuring coronary blood flow in man have been somewhat uncertain like the nitrous oxide method[1] or cumbersome and difficult like the method of catheterizing the sinus of Valsalve and injecting radio-opaque solutions. Recently Johnson and Sevelius have published an interesting paper on a method of accurately measuring myocardial blood flow with great promise of its successful application to man.[2,3] The technique is repeatable, rapid, non-traumatic and can in this sense be compared to a simple x-ray procedure.

A scintillation detector is applied to the chest wall over the heart and a minute amount of radioactive serum albumin is injected into an antecubital vein. The stylus of the recorder traces a peak and valley curve in response to the count frequency supplied to the detector. Peaks occur as the tracer dose enters first the right heart then the left and finally the circulation of the myocardium. Both myocardial blood flow and cardiac output are estimated directly from the curve. The method is quantitative, does not require cardiac catheterization and has been successfully used to estimate myocardial blood flow in both normal and arteriosclerotic patients. The authors have used this method extensively and demonstrated a 50 per cent decrease in mean myocardial blood flow in patients with coronary artery disease. It is a method which lends itself to studying the effect of drugs on the coronary arteries in the intact human and eliminates the need for transferring to man results obtained from experiments on animals, an unsatisfactory method at best, and seriously misleading at the worst. It is to be hoped that the method will be further improved so that the coronary arteries will be visualized at the same time and afford precise information so that the vascular surgeon can replace or by-pass a segmental obstruction in the coronary arteries and restore a heart to normal function.

There is little doubt that the test will become routine in cardiologic work in those patients with reduced myocardial blood flow that cannot be detected by other means.

L. H. N.

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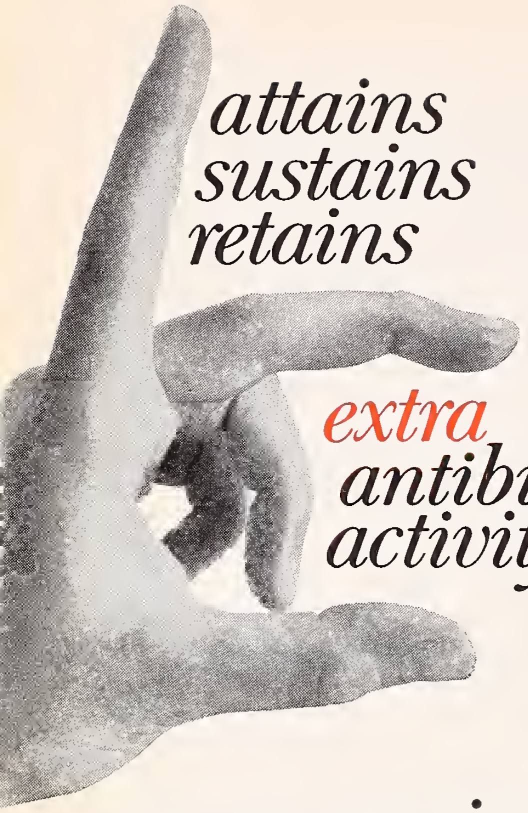
ANNOUNCEMENT
DATE LISTING SERVICE

Realizing that all too often the number of members who attend meetings of medical organizations is disappointingly small and that, in part at least, this curtailment of attendance is frequently brought about by one or more conflicts with other meetings, the Society's office is instituting a minor but potentially important service for the use of all legitimate medical organizations who may wish to avoid such conflicts.

Starting now, any group may notify this office of the time, place, and date on which it plans to hold a meeting. The information will be recorded and, if time permits, published in *Connecticut Medicine*. In addition, this knowledge will enable us to advise inquiring program chairmen as to the nature and dates of meetings already scheduled and allow them to determine whether or not those meetings will adversely affect their own or vice versa. It stands to reason that early listings will increase the efficiency of the plan.

This will be strictly a date clearance service; *not a date booking bureau.* The Society obviously has no prerogative to set or change dates for any meetings but its own. Those interested in utilizing this service may write to the Connecticut State Medical Society, 160 St. Ronan St., New Haven 11, Connecticut or call New Haven, UN 5-0587.



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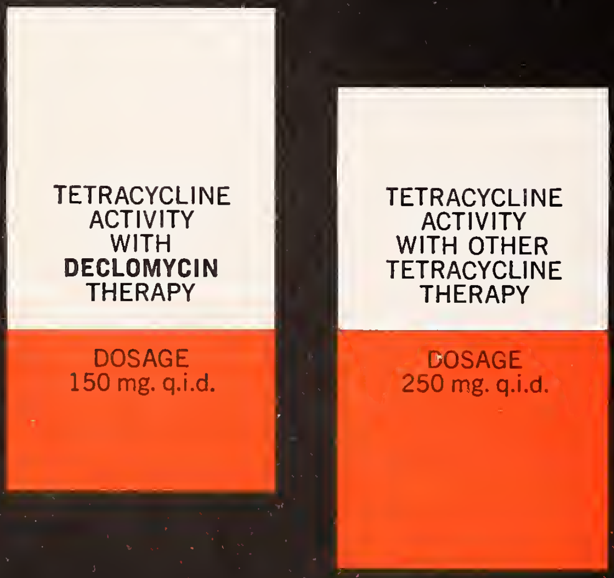
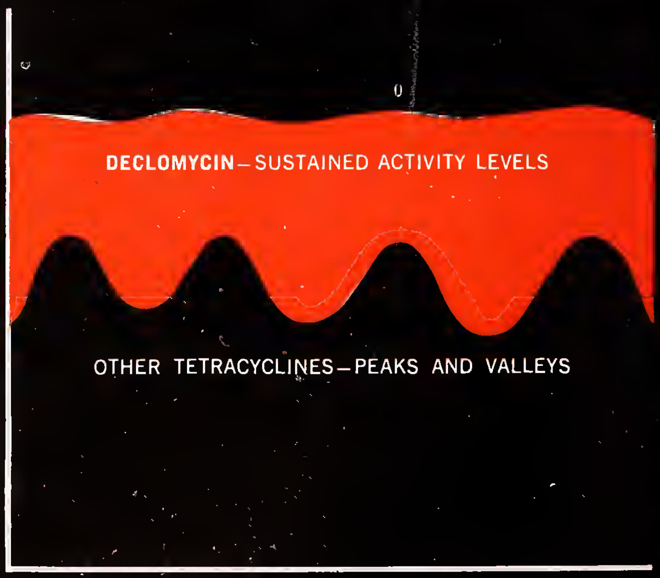


POSITIVE ANTIBACTERIAL ACTION



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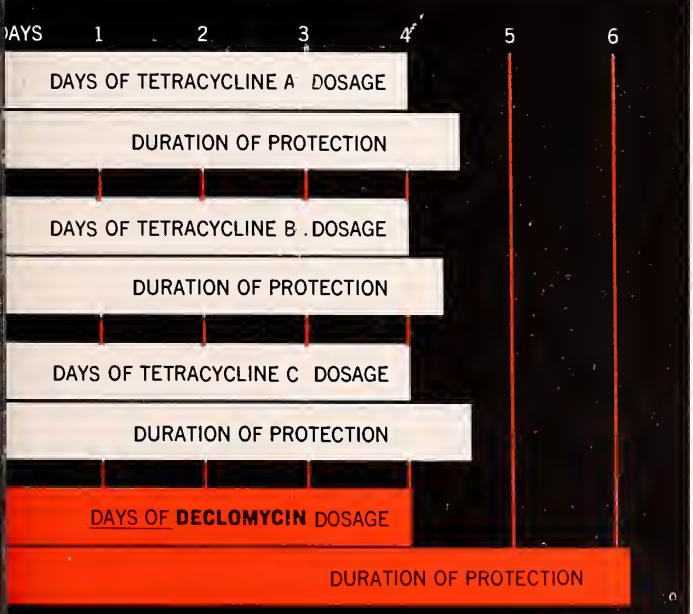

(1). Oxytetracycline. (2) Chlortetracycline. (3) Tetracycline.

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CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.
PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day — divided into 4 doses.
SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day — divided into 4 doses.

PRECAUTIONS — As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

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THE PRESIDENT'S PAGE

Intensified effort is now in evidence by supporters of schemes under which medical care would be subsidized for social security beneficiaries, regardless of need. By any logical actuarial considerations, such schemes would require a combined tax on workers and employers which must inevitably be increased to a point where our descendants would be getting less benefits for the money they pay in social security taxes than the same money would buy under voluntary insurance plans. Few people comprehend the actuarial complexities involved, however, and most will develop their confidence (or lose confidence) in voluntary health insurance programs on the basis of more obvious benefits currently available.

Physicians know that limited health care benefits under social security taxation would soon undergo the same expansion that has characterized the social security system all along. The eventual result would be a fiscally unsound system of federal medical care for everyone. But physicians themselves often either become confused by actuarial complexities or are hesitant to make the sacrifices essential to meet the challenge.

Our Society has at times manifested varying degrees of confusion and hesitancy. A 1939 Connecticut legislative act enabled the development of medical service corporations but ten years went by before the first Society-approved CMS plan was ready for sale. During the 1939-48 period the Society wavered among Society and independent corporation administered plans; non-profit carrier, commercial carrier and competitive carrier plans; service benefit and cash indemnity plans. Each of these approaches, singly or in various combinations, was officially endorsed at one time or another.

Finally launched in 1949, CMS became one of the fastest growing of Blue Shield plans. By 1957, the original plan had given way to the Lower Income Contract and the Preferred Contract (plus the Special Individual Contract). A broader basic plan was proposed in 1958 but it met strong Society disapproval chiefly because it proposed "integration" with a commercial insurance company's comprehensive plan and because it proposed service benefit income levels which the Society felt were too high.

At the end of 1960, CMS sent to the Society a proposed "Community Contract" for consideration by the Society. If it is approved, the "Community Contract" will be the broadest of all basic coverages offered by CMS. Because no one will be forced to give up current contracts, CMS will be able to offer contracts covering the field of needs, with respect to basic medical service coverage, apparent for the immediate future (i.e. Lower Income Contract, medium coverage Preferred Contract, and broad coverage Community Contract). Although no "integration" with a commercial contract is involved in the current proposal, these basic CMS contracts can be supplemented by policies independently offered to groups or individuals by commercial insurance companies.

The national administration which takes office in a few days has given considerable evidence of favoring tax-supported schemes rather than voluntary health insurance plans. It will take vigorous and timely action to meet this challenge.

In the light of the current socio-economic picture and political outlook, the proposed "Community Contract" warrants your careful consideration. Added to the other CMS contracts it could help in our fight to preserve individual initiative and personal responsibility.

John N. Gallivan, M.D.

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*
160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

Under the department "From The General Manager's Office" in the November, 1960 issue of Connecticut Medicine, *an editorial from* Detroit Medical News *by D. W. McLean, M. D. entitled "Freedom of Choice" was reprinted. Subsequent to publication, a copy of a letter by Emil Mazey, Secretary-Treasurer of the International Union, United Automobile, Aircraft and Agricultural Implement Workers of America, to Dr. McLean was sent to the managing editor by Mr. Mazey. The letter is being printed in this issue and this explanatory note is made to clarify the matter for those who may not have read the reprinted editorial.*

D.S.O'C.

October 21, 1960

Dr. D. W. McLean, President-Elect
Wayne County Medical Society
1010 Antietam
Detroit 7, Michigan

Dear Dr. McLean:

Your editorial in the October 10th issue of the *Detroit Medical News* has been called to my attention. I would like to thank you for your good wishes and to make a few comments on it which you may wish to print in the *News*.

You are certainly correct in indicating that under policies established by the Board of the Community Health Association, the principle of free choice of physician, hospital and medical care insurance coverage is afforded. Any person in a group to which coverage in CHA is made available is free to elect such coverage or to choose an alternative program. This same individual free choice provision is a feature of UAW collective bargaining contracts with the automobile corporations and is operative in California where Kaiser Foundation Health Plan coverage is available.

Your statement is somewhat inaccurate when it characterizes CHA as a "union medical and hospital project." The CHA is actually a community pre-payment agency and there are only two UAW representatives, Mr. Reuther and myself, on CHA's governing Board of fifteen. There are in addition, a bank president, four clergymen, a vice president and dean from the University of Michigan, three businessmen, a circuit court judge, a representative of the Building Trades Council and of the American Federation of Teachers. Metropolitan Hospital is organized as a non-profit community hospital under a separate Board whose President is Mr. Max Osnos, President of Sam's Incorporated. While I am a member of this Board, Mr. Reuther is not. There are a substantial number of community physicians with courtesy and consulting privileges at Metropolitan, in addition to the full-time and part-time medical staff.

Metropolitan Hospital and Clinics has entered into an agreement with CHA to provide health care services for CHA members. The CHA has not yet begun to enroll any subscribers, although it will do so soon. Membership will not be confined to UAW; it will be offered to any interested eligible group in Detroit. Each person in the groups approached, including Mr. Reuther and myself, will be free to join or not to join the plan.

So much for generalizations which are not relevant to the situation of my recent hospitalization. Mr. Reuther has been a Metropolitan in-patient on three occasions. Others in our families have been patients there. We got excellent care. We will again go there. For my present condition I was under treatment by physicians at Metropolitan Hospital. They sent me on referral to University Hospital as they would any other case in which they felt added consultation, diagnosis or treatment was medically indicated. This kind of referral is a standard procedure at Metropolitan and is even included in the agreement between CHA and that institution so that it will continue as standard practice when CHA subscribers are enrolled.

Despite minor inaccuracies, I think your editorial performed a real service in pointing out to the medical community that CHA will be truly a free choice system. We had earlier tried to make this clear to the whole community and we are grateful to you for again pointing out this important principle of CHA operation.

Sincerely,
Emil Mazey
Secretary-Treasurer

COUNCIL MEETING

Wednesday, November 16, 1960

A meeting of the Council was called to order by the Chairman, Dr. Gilman at 2:30 P.M. on Wednesday, November 16, 1960. Present in addition to the Chairman were Drs. Gallivan, Feeney, Goldberg,

Hess, O'Connor, Caplan, Cullen, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Buckley, Rentsch, Murray, Jr., Gorman, Ogden, Gevalt, Grant, Davis, Phillips, Chartier. Also present Dr. William R. Richards, General Manager. Absent were Drs. Gardner, Katzin, Schiavetti, Purnell.

MINUTES OF MEETING, OCTOBER 23, 1960. It was VOTED to accept the minutes of the October 23, 1960 meeting as printed.

AMA RESOLUTION ON THE NATIONAL FOUNDATION. Acting upon the favorable recommendation by Max Caplan, Meriden, in his report as a Study Committee of One, it was VOTED to adopt American Medical Association Resolution No. 2 (June, 1960) which contains certain policy statements for the guidance of state medical societies in their relationships to Chapter-level units of The National Foundation.

ENGAGEMENT OF A LEGISLATIVE AGENT. After hearing the reports of Drs. Gallivan, Feeney and Richards on their interviews with three different persons "potentially suitable to serve as a lobbyist for the . . . Society at the Connecticut General Assembly for the biennium 1961-63," it was VOTED to offer this post to Mr. Joseph P. Cooney of Hartford, under such terms of performance and reimbursement as are determined to be mutually agreeable.

REPRESENTATIVE TO THE CONNECTICUT SAFETY COMMISSION. After considering certain correspondence between Louis Spekter, Hartford, Chairman of the Society's Committee on Accident Prevention and Mr. James K. Williams, Executive Director of the Connecticut Safety Commission, it was VOTED to recommend the names of the following members of the Society for appointment (of one) to the Connecticut Safety Commission:

Bernhard Rogowski, M.D., New Haven
Harold A. Bergendahl, M.D., Norwich
James M. Cary, M.D., Waterbury

It is understood that the Governor makes this appointment.

COMMITTEE ON REHABILITATION. In response to certain information received from Dr. Ralph E. DeForest, Secretary, AMA Committee on Rehabilitation, and upon favorable recommendation by J. Howard Johnston, Chairman of the Society's Committee on Industrial Health, it was VOTED to direct the Chairman of the Council to appoint a Committee on Rehabilitation. The Chairman received several suggestions as to what professional classifications might properly be represented on the new Committee.

MEDICAL CARE OF THE AGED PROGRAM. The Chairman reported on a recent conference held between Governor Ribicoff and Dr. Gallivan, Dr. Feeney and himself. The subject of discussion at the conference was implementation of the Kerr-Mills Bill in Connecticut. While not expecting immediate action by the administration in this regard, Dr. Gilman felt he had received reassurance from the Governor that when a commission was appointed to begin a study of this important matter, a member of the Society would be named to serve.

Dr. Feeney described the progress being made by his committee which has been meeting with the representatives of a large number of health care and service agencies, and announced that the group expects to meet again on November 30, 1960. The Society's three AMA Delegates and Ellwood C. Weise, Sr., Bridgeport, a member of Dr. Feeney's Committee, will attend an AMA conference on November 27th which proposes to explore in depth the possible ways in which the Kerr-Mills Bill can be put into operation at state level and what contribution can be made to the development of suitable assistance programs for the "medically indigent" by state medical societies.

THE BUDGET FOR 1961. The report of the Budget Committee was presented in quite some detail by Isadore S. Goldberg, Torrington, Treasurer of the Society. After voting to amend the report in several particulars, it was VOTED to approve the 1961 Budget as amended and to transmit same to the House of Delegates for approval on December 6, 1960.

SECTION ON RADIOLOGY. A letter was read from Wayne P. Whitcomb, Secretary-Treasurer of the Section on Radiology, which informed the Council that action by the Section on resolutions adopted by the House of Delegates (April 26, 1960), with regard to the agreement as to a radiological fee schedule entered into by the Section with the Compensation Commission in 1959, was being referred to the next general session of the Section.

After extensive discussion, there was general agreement among members of the Council that this proposal did not constitute "definitive action" by the Section on Radiology, as requested by the Council on October 23, 1960, and it was VOTED to adopt the following motion:

"IT IS MOVED: That the president of the Section on Radiology of the Connecticut State Medical Society be instructed to call a special meeting of the Section on Radiology, prior to November 28, 1960, for the purpose of taking definitive action on the pertinent resolution of the Fairfield County Medical Association, adopted by the Society's House of Delegates on April 26, 1960, or in some other way take effective steps to rescind immediately the 1959 action of the Section on Radiology by which it entered into a unilateral agreement with the Connecticut Compensation Commissioners, and report in writing the definitive action of the Section in this regard to the Chairman of the Council on or before November 28, 1960, and it is further

MOVED: That in the event of failure of the Section on Radiology to comply with this instruction of the Council by November 28, 1960, the Executive Committee of the Section on Radiology is given notice to appear before the Board of Censors of the Connecticut State Medical Society (the Council) promptly at 1:00 P.M. on December 6, 1960, at the Hunt Memorial Building, 230 Scarborough Street, Hartford, Connecticut."

CONNECTICUT MEDICAL SERVICE, INC. The Chairman reported that he has received information that a new CMS contract is nearing completion and that the CMS-CSMS Liaison Committee is scheduled to give preliminary review to this contract and consider other related matters before the end of November. Details of the new CMS plan were not available for presentation to the Council. At the request of Dr. Feeney, the Chairman reiterated that the Society's representatives on the Liaison Committee had authority *only* to receive, review, discuss and transmit to the Council new CMS contracts or major revisions of existing CMS contracts; that approval, acceptance or other official decision by the Society on such contracts is to be determined through application of the method adopted by the House of Delegates on April 25, 1959.

THE NEW ENGLAND POSTGRADUATE ASSEMBLY. Ellwood C. Weise, Sr., Bridgeport, a delegate to the Council of N. E. State Medical Societies, apprised the Council of the fact that the Massachusetts Medical Society, the Vermont and New Hampshire societies (and possibly the Maine association) had voted to have the operation of the N. E. Postgraduate Assembly taken over by the N. E. Council. Noting that there is a difference of opinion among the Society's three delegates on this matter, that the N. E. Council has not yet taken official action on it, and expressing concern that the Society's delegates may be asked to voice an opinion in this regard, Dr. Weise requested instruction from the Council.

After some discussion, it was VOTED to adopt the following motion: "that the Society's Delegates to the Council of New England State Medical Societies be informed that they are to vote on operation of the N. E. Postgraduate Assembly by the N. E. Council *only* after receiving instruction from the Council or the House of Delegates of the Connecticut State Medical Society."

LIAISON WITH THE CONNECTICUT PODIATRY ASSOCIATION. It was VOTED to adopt a resolution, presented by Denis S. O'Connor, New Haven, which reads:

"WHEREAS: Podiatry is a para-medical activity and

WHEREAS: it is evident that there exist matters of mutual interest and concern between the Connecticut State Medical Society and the Connecticut Podiatry Association and

WHEREAS: relations between the two organizations would be facilitated by liaison, therefore be it

RESOLVED: That the Council of the Connecticut State Medical Society appoint a committee to investigate the advisability of establishing a liaison committee with the Connecticut Podiatry Association at this time.

It was further VOTED to direct the Chairman to appoint not less than three, nor more than five, members of the Society to serve on this study committee.

CONNECTICUT SOCIETY FOR MEDICAL RESEARCH. It was VOTED to appoint Orvan W. Hess, New Haven, as a representative to this newly formed organization.

WOMAN'S AUXILIARY TO THE CONNECTICUT STATE MEDICAL SOCIETY. Acting upon a request from the Executive Board of the State Woman's Auxiliary, it was VOTED to offer clerical assistance to the officers and committee chairmen of the Auxiliary, such assistance to be rendered at the Society's offices and subject to the discretion of the General Manager.

COMMITTEE ON HOSPITALS. It was VOTED to accept the resignation of Henry M. Pollock, formerly of Bristol, as a member of this Committee.

CANCER COORDINATING COMMITTEE. It was VOTED to appoint Henry Eisenberg, Hartford, to membership on this Committee.

COMMITTEE ON PUBLIC HEALTH. A number of requests and recommendations submitted by the Public Health Committee were acted on as follows:

(a) It was VOTED to adopt the following resolutions:

RESOLVED: that, having received a favorable report from its Committee on Public Health concerning the proposed administration and application of live polio virus, in the amounts and under a time schedule recommended by Dr. John R. Paul, New Haven, the Council of the Connecticut State Medical Society endorse a pilot program for trial and demonstration in the State of Connecticut."

(b) It was VOTED to authorize the attendance of Joseph L. Hetzel, Waterbury, (or a physician member of the Society whom he may designate) to attend the 8th National Conference on Physicians and Schools, Chicago, March 9-11, 1961 and it was further VOTED to reimburse Dr. Hetzel for reasonable expenses associated with such attendance.

(c) It was VOTED to endorse a "Statement of Purpose" of a proposed act to apply to the donation of human bodies for medical study. The Statement reads: "To establish the right to donate one's body for medical study by a specified written instrument; to provide for the administrative mechanism and legal safeguards to insure preservation of human dignity for bodies donated for medical study; and to further the study of medical sciences in Connecticut institutions through making available bodies to be used for such study by written instrument executed by the donor."

(d) Regarding joint publication of a "Manual on Staphylococcus Control" by the Society and the State Department of Health it was VOTED to disapprove the appropriation of $220 as the Society's share of the anticipated costs of such publication.

(e) Regarding a proposed change in P.L. 22-359, "The Control of Rabies," it was VOTED to table consideration of this matter pending the receipt of further information on the proposal.

(f) Regarding approval of a "Routine Immunization Schedule," requested by the Committee on Public Relations and prepared by the Committee on Public Health, it was VOTED to table consideration of this matter pending receipt of further information.

CITIZENS COMMITTEE FOR A MEDICAL-DENTAL SCHOOL. In response to an invitation to appoint an official representative of the Society to participate in the activities of this Citizens Committee, it was VOTED to decline the invitation for the reason that, while it is a matter of record that the CSMS is in favor of the establishment of a second medical school in the State of Connecticut, the Society has never aligned itself with any group which favors specific matters in this regard, such as location, administration, financing, etc.

STUDENT MEMBER. It was VOTED to elect to student membership Thomas Anthony Martone of 92 Edwards St., New Haven, Boston Univ.—1964, Pre-Med. Fairfield Univ., Parent: Anthony Martone.

REPORT OF COMMITTEE ON HOSPITALS. It was VOTED to adopt the report and recommendations of the Committee on Hospitals regarding the formation of a CSMS panel for review of physician-hospital disagreements and to transmit the report and recommendations to the House of Delegates for consideration and adoption on December 6, 1960.

RESOLUTION ON "GENERIC NAME" DRUGS. It was VOTED to adopt a resolution on generic name drugs submitted by the Joint Conference Committee with the Connecticut Pharmaceutical Association, and to transmit the resolution to the House of Delegates for consideration and adoption on December 6, 1960.

DATE OF NEXT MEETING. It was VOTED that the Chairman of the Council set the date for the next meeting.

SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES

December 6, 1960

SUMMARY OF ACTIONS

The 1960 Semi-Annual Meeting of the House of Delegates of the Connecticut State Medical Society was held at the Hunt Memorial Building, Hartford, on December 6, 1960.

In addition to receiving remarks or reports (appearing elsewhere in this issue) from the President, John N. Gallivan; the Chairman of the Council, Ralph L. Gilman; AMA Delegate, James R. Cullen; and the General Manager, William R. Richards, the House considered and acted upon the following matters:

A. Voted to approve the 1961 Budget as presented by the Treasurer, Isadore S. Goldberg. Annual dues remain at $33 and the voluntary dues increase of $15 for AMEF will be continued in 1961.

B. Voted to adopt the recommendations of a Council-appointed ad hoc committee to review and re-examine the relationships between the Society and the Council of New England State Medical Societies. The recommendations are:

1. That the Connecticut State Medical Society adopt the position that the principal purpose of the Council of the New England State Medical Societies, despite its alteration by precedent and by-law changes, is and should continue to be that defined at the time of its organization: "to bring about closer cooperation between the state medical societies in New England in the development and maintenance of the highest standards in the conduct and administration of medicine, and in the furtherance of plans to improve the health of all the people in the New England states."

2. That, irrespective of how many "representatives" of each constituent state medical society may be classified as members of the New England Council, there be *only three voting representatives* of each constituent society allowable at any one meeting.

3. That for the Connecticut State Medical Society, these three voting representatives be the three "Delegates to the Council of New England State Medical Societies" (or officially designated alternates), annually elected by the Council of the Connecticut State Medical Society.

4. That, beginning in 1961, the Council of the Connecticut State Medical Society designate one of these delegates to be Chairman of the delegation and that the designated chairman be charged with the responsibilities of acting in a liaison capacity between the two organizations and of preparing and

filing a "Report of the Delegates to the Council of the New England State Medical Societies" at each annual meeting of the Society.

5. That the Connecticut State Medical Society adopt the position that in all matters calling for a vote of the *voting representatives* (as defined in recommendation No. 2), the original Method of Procedure of the New England Council be adhered to: "Each member Society shall be entitled to have three delegated representatives present at each meeting but shall have *only one vote* (as a Society)."

6. That the Connecticut State Medical Society adopt the position that any proposal of the Council of the New England State Medical Societies which calls for joint action, support or participation by each and all of the constituent societies must be submitted to the governing bodies of those societies for a decision to approve or disapprove of the proposal and that, unless given specific authorization to do so, voting members of the constituent organizations *shall not* cast their unit votes for or against such proposals until their respective governing bodies have made a decision on each proposal submitted and have instructed their representatives as to the nature of that decision.

7. That the Connecticut State Medical Society adopt the position that if any constituent organization rejects a proposal of the New England Council within 90 days from the date of submission to the constituent organizations, and so informs the Executive Secretary of the New England Council within that period, such proposal must be reconsidered at the next meeting of the Council of the New England State Medical Societies.

8. That, apart from the payment of annual dues to the Council of the New England State Medical Societies, the Connecticut State Medical Society consider itself to have *no* commitment to lend financial support to any activity of the New England Council unless, in addition to approving a submitted proposal, the Council of the Connecticut State Medical Society also votes to authorize the expenditure of specific amounts of general funds as the Society's proportionate contribution toward meeting the actual costs associated with that proposal; and that when proposals of the New England Council are submitted to the constituent societies for consideration (as described in recommendation No. 6), all proposals be accompanied by careful estimates of possible costs, if any, attendant to their implementation.

9. That only the three elected delegates to the New England Council (or designated alternates) be reimbursed for reasonable expenses incidental to their attendance at the two regular meetings of that organization held each year.

10. That other members of the Connecticut State Medical Society, who may be requested to or who elect to participate in activities of the New England Council, be reimbursed for expenses attendant to such participation entirely at the discretion of the Society's Council, and only under the following conditions:

(a) Participation has been authorized and requested by the Council of the Connecticut State Medical Society incidental to approving a submitted proposal of the New England Council, or

(b) Prior authorization for reimbursement has been obtained from the Society's Council, either on request of the New England Council or of the member of the Society concerned.

C. Voted to adopt recommendations made by the Committee on Hospitals relative to the setting up of a panel which, on request, may assist and make recommendations in resolving disputes which have arisen between members of the Connecticut State Medical Society and hospital administrations and which have not been resolved after certain procedures, defined as "Guiding Principles," have been carried out within the hospital organization itself.

The recommendations of the Hospital Committee are embodied in the following:

MOTION

IT IS MOVED: That the Connecticut State Medical Society recommend that if a disagreement arises between one of its members and the administration of a hospital, the medical staff of the hospital concerned seek to arbitrate the disagreement by following the "Guiding Principles for the Resolution of Disputes Arising Between Members of the Connecticut State Medical Society and Hospital Administrations," approved by the Society's Committee on Hospitals on September 28, 1960, and it is further

MOVED: That, upon request, the Connecticut State Medical Society form a panel of three of its members, the purpose of which shall be to assist in resolving disputes between members of the Society and hospital administrations wherein disagreement persists after all procedures outlined in the "Guiding Principles" have been carried out, and it is further

MOVED: That the three members appointed by the Connecticut State Medical Society to serve on each such panel be chosen by the President of the Society from a group of fourteen members of the Society which shall be appointed annually by the Council, and it is further

MOVED: That in naming the members of each such panel, the President of the Society choose three physicians who have no connection with the case in dispute, either by reason of location of practice, type of practice, hospital affiliation, personal association or other pertinent consideration, and it is further

MOVED: That the group of 14 members of the Society heretofore described be appointed as follows: One member each from the Windham, Tolland, Litchfield, Middlesex and New London county medical associations, and three members each from the New Haven, Fairfield and Hartford county medical associations, and it is further

MOVED: That each such panel, when appointed, have access to all necessary and desirable legal counsel upon authorization by the Council of the Connecticut State Medical Society.

Guiding Principles for the Resolution of Disputes Arising Between Members of the Connecticut State Medical Society and Hospital Administration

Recognizing that the granting of privileges to physicians to work in a hospital is of vital importance to the doctor, the hospital and the community, and must be safeguarded at all times, the Connecticut State Medical Society recommends that each hospital follow the fundamental principles outlined in the "Model Medical Staff By-laws, Rules and Regulations" of the Joint Commission on Accreditation of Hospitals.

Particular attention is called to the following principles:

(a) A definite procedure, including application, review of credentials, right of appeal, and final action on appointment, promotion, demotion or dismissal must be followed.

(b) A representative Credentials and Qualifications Committee should be formed as a standing committee.

(c) A representative joint conference committee from the Medical Staff and Board of Trustees should be formed.

(d) In any case where either the "Credentials and Qualifications Committee," duly charged with this responsibility, or the executive committee of the Medical Staff does not recommend reappointment, or where reduction of privileges is recommended, the administrator shall notify the physician concerned and he shall be given an opportunity of appearing before the credentials committee and joint conference committee in joint session.

In such cases where the above or similar procedures have been carried out and the individual physician and the governing body of the hospital are in disagreement and either party requests consultation, the Connecticut State Medical Society will furnish a panel of three members to assist and make recommendations.

D. Voted to approve the formation of a Section on Preventive Medicine and Public Health.

E. Voted to adopt the following Resolution on "Generic Name" Drugs, based on recommendations of the Joint Conference Committee of the Society with the Connecticut Pharmaceutical Association but being considerably amended by a reference committee:

Resolution on "Generic Name" Drugs

BE IT RESOLVED: That all physicians reserve to themselves the unequivocal right to prescribe whatever medications they believe will serve the best interests of their patients' health, whether such medications be designated by their trade or generic names, and be it further

RESOLVED: That when a generic name drug is prescribed by a physician, the prescription may designate the name of a specific manufacturer, and be it further

RESOLVED: That the physicians and pharmacists of Connecticut should adhere to the aforementioned resolves in the best interests of the patient-physician-pharmacist relationship, and be it further

RESOLVED: That these resolves be transmitted to the governing body of the Connecticut Pharmaceutical Association.

F. Voted to refer the problems arising out of the 1959 agreement between the Section on Radiology and the Connecticut Compensation Commission (establishing a differential fee schedule) back to the Council for further review and investigation.

G. Received as information a report from the Third Party Payments Committee on evaluation of the document "Some Guiding Principles on Financing Health Insurance for the Medically Indigent," presented to the House of Delegates in the Report of the Secretary, April 26, 1960. Since no recommendations were contained in the report, no other action was taken.

H. Received as information a progress report of the Committee to explore the possibility of setting up a fund for indigent and permanently disabled members of the Society (appointed December 9, 1959). The question as to whether or not the Committee should pursue its exploration of the matter remained unanswered by the House. No recommendations were made in the report.

I. Voted to confirm all changes in Standing Committees which were approved in the interim by the Council.

J. Voted to adopt a Resolution on Hospital Accreditation, introduced from the floor and amended by the House as if in a Committee of the Whole. The resolution adopted reads as follows:

Resolution on Hospital Accreditation

WHEREAS: It has been reported that the Joint Commission on the Accreditation of Hospitals will, in the future, eliminate the small hospital from accreditation for internship if it does not fill its vacancies over a period of two years, therefore be it

RESOLVED: That the President of the Connecticut State Medical Society appoint a committee to investigate the situation regarding the rulings of the AMA Committee on Medical Education as applied to the availability of interns and residents to the hospitals of the State of Connecticut, and be it further

RESOLVED: That this committee report on its investigations to the next meeting of this House of Delegates, and be it further

RESOLVED: That this committee is empowered to bring back recommendations for action or actions deemed necessary by this House of Delegates.

The Society's Placement Service is in receipt of the following:

PLACEMENT WANTED

Horace Sarter, M.D., Age 30, M.D. University of Zurich, Switzerland. Specialty Pediatrics. Group practice or partnership.

Locum Tenens available for Pediatric or General Practice in April and/or May 1961 (two months). Now finishing Pediatric residency. Age 27.

ANYONE KNOWING OF AN OPENING FOR THIS PHYSICIAN IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

PLACEMENT OPPORTUNITY

Very lucrative practice mainly orthopedics, Hartford, Connecticut. Sudden unexpected death of owner.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

Doctor's Responsibility in Death Certification

The Coroner for New Haven County, Mr. James J. Corrigan, in a recent communication to the General Manager of the Connecticut State Medical Society, expresses the concern and the dissatisfaction of the coroners of the State with the attitude of many members of the medical profession in the matter of signing death certificates of patients who are professionally known to them but who die suddenly from causes which can be presumed to be natural. The coroners feel that in too many cases the medical examiner is called in unnecessarily with an increased cost to the State.

The pertinent statute in regard to this problem (Sec. 6-55 General Statutes Revision of 1958) reads in part: "When any person comes to a sudden, violent or untimely death and when any person is found dead the manner of whose death is unknown, anyone who becomes aware of such death shall forthwith report the same to the medical examiner for the town in which the dead body lies."

Mr. Corrigan, quoting from Section 7-62 from the General Statutes entitled "Death Certificates" said "The physician last in attendance upon a person in his last sickness, within 24 hours after the death of such person, or a medical examiner, in any case of which he has cognizance at the time of making his report, shall make a certificate upon a blank furnished by the State Department of Health" . . . comments "It is immediately apparent that the medical examiner should not have 'cognizance' of these cases to which I refer, and, by statute, it is the duty of the physician last in attendance to sign these certificates."

In a subsequent letter, Mr. Corrigan points out that the office of Coroner was established "to ensure that no crime of homicide goes undetected and unprosecuted." He goes on to state that the medical examiner is concerned not with "medically obscure" cases but "factually obscure" cases. If the physician last in attendance feels reasonably sure that the patient died as a result of natural causes, he should not refer the case to the medical examiner even if he cannot be completely certain of his diagnosis."

Any doctor conversant with the problem presented by Mr. Corrigan should make an effort to read and understand his duties as a physician and to determine where his responsibility terminates and that of the medical examiner begins.

It is obvious that doctors as taxpayers should be concerned with unnecessary expense to the State in the matter of death certification.

This presentation of the problem can hardly be expected to clarify the matter for the doctors of the State. It is strongly recommended that local medical societies and hospital staff organization program committees devote one or more of their meetings to the more adequate presentation of this matter to their members by the Coroner of the area of the state in which they live.

Special Article

NOTES FROM A MEXICAN DIARY

Russell V. Fuldner, m.d., *New Haven*

Monterrey, May 1960

The serious-minded tourist, willing to devote all of two or three days to studying Mexico, travels for the purpose to Monterrey, 150 miles from the Rio Grande. It is a method less convenient, though, than absorbing the Mexican essence in a night club on the border, and decidedly drier. South of Laredo the countryside appears but one remove from desert. In fact, the trip might be monotonous except for the relays of officials who stop to check you. Although it is hard to speak with assurance about the mysterious ways of these beings the seeming purpose of each check is only to ascertain whether the prior relay stopped you for *their* check. . . . Still, it is reassuring in this early contact with officialdom to meet no aversion to things American—not to our cigarettes, at any rate.

Let your companion from Laredo to Monterrey be a poet. Cacti, he might observe, have at last vanquished the wheatland. A day earlier, riding through Texas, we had seen their advance parties skulking on the fringes of the tilled fields. Now they have taken over, relentless, keen-bladed masters of the land. Their guerrilla allies: dusty, hard-bitten shrubs, dry little palms. Nothing soft survives. Here, the hardness of the soil; there in the distance, the strong, hard ranges pointing the way to Mexico's great eastern sierra. Near and far the peace of submission, the confession to the gods of Henley of all things that manage yet to stay alive.

Monterrey, where the mountains begin, is one of Mexico's most industrialized cities, her third largest. Spreading itself over many a cheerless acre of working-class quarters it gallantly assumes, part-time, the role of jolly host to numerous American visitors. A melange is provided of French cooking, Spanish architecture and local color effects arranged to accord with what the Mexicans think is the American concept of things Mexican. The greatest success, indubitably, is achieved with the manufacture of German beer. Great trailers deliver this dry, civilized brew to all of Mexico—evangelists on the rescue of the peon from his *pulquería*. On sunny hills west and south of Monterrey the grapes for several good clarets are grown. White wines are produced also, at least one of them resembling a fine Vouvray.

Ciudad Valles

In 24 hours we have travelled three lands—the astringent approaches to Monterrey, green hills between there and Ciudad Victoria, and now the tropics, hot and overgrown. Banana trees, sugar cane and large plantings of maguey have replaced the citrus groves we rode through a few hours back. To the east, unseen, cotton and hemp plantations; beyond them the waters of the Gulf. Unseen till perhaps too late: cows, mules, burros, chickens and goats thronging the highway. These animals, pasturing on cleared strips along the shoulders of the road, adopt an attitude of having as much right to the highway as you. In this arrogance, sadly, they seem encouraged by their masters. Fencing is scorned. When, with the pungent smell of hot brake linings ascending to your nostrils, you trade stares with one of these quadrupeds just the other side of your front bumper, at very least you might expect its master to hurry from his house and belabor the beast with a switch. But one waits in vain for the quick shuffle of bare feet. No sound emerges from the little sapling hut with its roof of palmetto, there by the side of the road. . . . Curious eyes, it seems, are peering from beyond the nopal hedge, a half-dozen pairs, each pair two or three feet above the ground. . . . But no action, no movement at all save the poinciana's sway, its flaming blossoms fondly shielding the sun-hot thatch.

San Miguel Regla: roadside lunch

San Miguel Regla

After Hernando Cortes had decimated the Aztecs in 1521 there followed three centuries of Spanish peace, years which left, in Mexico, as gentle a memory of Spain as our Mexican War has of the United States. Among the Spaniards who managed to do himself well none was more successful than the Conde de Regla, born 1710 as Don Pedro de Terreros. After achieving affluence he is supposed to have assured the King of Spain that should his Majesty deign to visit Mexico the royal mount need tread nothing baser than ingots of silver from Vera Cruz to the capital, a distance approaching 300 miles. The silver was extracted from mines a little north of Mexico City, near the city of Pachuca, and in this neighborhood the Conde apportioned to himself three haciendas, all of befitting size and scale.

One of these estates, San Miguel Regla, descending through the centuries' vicissitudes, now accommodates those who knock on its gates and have had the foresight to telephone beforehand. Inside its ample walls, and extending beyond, a succession of lakes and pools binds charming landscapes on soft green ribbons of water. Brick ovens and arches, like the waterways relics of bygone smelting operations, lie half submerged in quiet, tree-reflecting ponds. Atop an old masonry aqueduct a torrent rushes still, to end in a lively fall. Should you wish to declaim Byron along the grassy walks there are few to hear and none to heed. If you paint, you must take Francesco Guardi for your master here. . . . (A footnote for the practical: San Miguel's lakes are well stocked with home-grown trout).

We arrived at this jewel, this silver-set emerald, after a long run from Ciudad Valles. On this leg of the trip we seemed, half the time, to be travelling as much vertically as horizontally. Some ascending loops of road were so sharp that had we been driving one of Detroit's infinite eights we must have met ourselves turning around. Our remarkable little Rambler, burdened to the axles with passengers and luggage, took all this with the unconcern of the burros plodding by the roadside. By the time we reached Pachuca it was raining and already dusk, a confrontation not especially heartening with twenty miles to go through lonely hills. While Mexico's main roads are well paved and maintained wandering cattle, not to mention a paucity of road signs and illumination, make night driving chancy. . . . Creeping along the last stretch to San Miguel in the rain-soaked, inky black—by now on a dirt road, the night chill gathering—we might have been edging along a crater of the moon for all one could tell. We were soon to find out, luckily, that no matter how wet or deserted your surroundings in Mexico, you have only to stop your car a moment or two—a small curious boy appears from nowhere, alert to your needs. On this occasion our small boy ran alongside the car, and by dint of shouting commands as to a dim-witted bull, eventually succeeded in shunting us toward the hacienda's great wooden gates. These were swung open after the guard had satisfied himself that we were not a carload of bandits. Soon we were warming at our own particular hearth, thence to the cheery *comedor*. . . . How abiding the simple joys! . . . The snug roof after the cold night, the light after the dark, the warming supper, the solace of the temperate cup!

San Miguel Regla: hold still for the man!

Mexico City

The tourist inspired by red and yellow bullfight posters to fly to Mexico has reason to think, viewing downtown Mexico City, that his plane must have strayed to some such place as Chicago. Second city of Latin America (after Buenos Aires), Mexico City has massive hotels and office buildings, and the tallest skyscraper south of the U.S. Its citizens like to project the cosmopolitan image by representing traffic as the world's worst. Chauffeurs for your car can be picked up on the city's outskirts, as one might hire native guides before plunging into the jungles of Mato Grosso. Traffic in New York City is as dense, however, and in Paris as impulsive. Perhaps it is the combination of these qualities which makes traffic distinctive here. The Paseo de la Reforma, almost as handsome as the Champs Elysées, far outranks the latter for sport. Its intersections, traffic circles called *glorietas,* are maelstroms fed by rushing streams from perhaps eight or ten contributory sluices. Honor requires one, in navigating these perilous areas, to maintain all possible speed, at the same time displaying no interest in—better, no manifest awareness of—the car whose rapid approach from starboard threatens you with imminent collision. The police enjoy themselves as much as everyone else. They blow their whistles after the rocketing cars in what must be a kind of *Ole!* for a dangerous job well done. Their shrill piping exerts no discernible effect on the drivers, assuming they are able to hear it amid the roaring swirl.

The foreigner undertaking to drive a car about town finds that his best friend is an Aztec dead these 400 years and more. Cuauhtémoc's bronze effigy forms a guiding landmark overlooking the city where the Avenida Insurgentes, chief north-south artery, crosses the Paseo. Eastward from the monument you may explore the old quarter built on the ruins of Aztec Tenochtitlán. Westward lies Chapultepec Park, where Americans (no, please: *norteamericanos*!) under General Winfield Scott sealed the victory that gave us our Southwest. North from Cuauhtémoc extend the two shortest roads home—the mountain route we came by, the fast route we'll take returning. South, the cities of tourist choice: Taxco, Cuernavaca, Acapulco; nearer by, the water-girt gardens of Xochimilco. Gladioli, sweet peas, callas, blossoms beyond naming grow here as grass elsewhere. The behavior of the local gentry—who descend on the tourist like flies, vending, importuning, soliciting, propositioning—unfortunately erases any fragrant recollection of the place. In Aztec times Xochimilco—the place of flowers—was a resort of nobility. Perhaps Cuauhtémoc knew it ere the Spainiards came, bearing in hand the slow torture and the noose that were to mark his end.

The tourist, treated throughout most of the world only as well as he deserves, fares a little better than this in Mexico City. The best hotels, shops and restaurants compare with good ones anywhere. In instances where this may not be true it is not from lack of trying. Journeying from the capital for diversion, the traveler easily reaches stately scenery in one direction, fiestas in another, incomparable archeological remains in several. Of recent art there is profusion, if not always variety; the prevailing tone is grandiloquent and an object lesson often guides the brush. . . . In paint at least, homilies are tedious. If art cannot lie neither, it seems, may it moralize. . . . Tiring of these educated joys the tourist may, and usually does, take himself off to Acapulco, hardly an hour by plane, six or seven hours if you travel by way of the excellent *carretera*.

Acapulco

Notwithstanding man's dedicated efforts, the face of the earth manages to retain a few places of more or less unspoiled beauty. Yosemite and Cannes come to mind. Number Acapulco among them, but visit it soon. You may still have a mile of white strand much to yourself, if your taste runs to solitude. If not, crowd in as merrily as you please with the rest of the world at the Caleta beach. Dine in high style on the terrace of Las Brisas, overlooking the full and splendid sweep of the bay. Or unlace with fellow bohemians at the open air spots on the city's old plaza. In short do what you like, so long as you go fishing once. The captain of the launch all but guarantees your return with a sailfish or swordfish worth mounting. . . . Prices in Acapulco, as in Mexico generally, vary little from those at home. This applies to what the tourist does and buys—the expatriate lives here cheaply. A chief appeal of the country seems to be the abundant availability of personal service, nearly always rendered cheerfully and with interest.

Acapulco, deepest Mexico for most Americans, is to be our farthest reach from home. Beyond this neck of the country, as one approaches the Guatemalan border, the altitude is gradually lost, and with it the tempered climate which makes Mexico City pleasant to live in. Yucatan, lying far to the east, is attainable chiefly by air. Even though a road led there we'd defer our visit till another occasion, having learned by now that Mexico, a rich diet, is best taken in small helpings.

Taxco: baby carriage

Taxco

For a brief stopover you might do worse than the Hotel de la Borda. The Hotel holds the town at arm's length, as one might an oil painting or a newly caught catfish. From your bedroom balcony in the cool evening survey Taxco straggling up and down its hill. The sun wanes, its glow transferring to the flood-lit church of Santa Prisca. The church's old tiled dome dominates the night scene, sparkling gold amid the town's myriad diamond lights. This is the hour of quiet release, the occasion of which all the dogs of Taxco have dreamed through the hot afternoon. . . . Rich dog bounding from its mistress's lap, poor dog shaking off the street sweepings of the day . . . dogs near and far, barkers, bayers, yippers, yowlers . . . the joyous and the nervous, the doleful hound, the sweetly improvising mongrel—one and all attune their voices to herald the yet-shy moon. With her appearance the chorus grows, not to diminish until she has long vanished in the west.

This from your balcony and bedroom at the Borda. In town, fronting the square with cathedral and village fount, stand the silver shops whose workrooms attract such droves of visitors. One of the latter, treading the streets, exclaims on the quaintness of Taxco's terraced dwellings; another sees chiefly the litter. Like a fat catfish, the town is surely not without its own peculiar worth, but for judgment in this special matter we defer to the expertise of fishermen.

San Miguel de Allende

Travelling north on the central highway, beyond Mexico City, one traverses a stretch of country like our own mid-west: flat and fertile, with immense fields of wheat, alfalfa and young corn. Power-driven mowers and threshers contrast with the animal-drawn equipment seen in many parts of Mexico. Later the way leads through clean wooded landscapes on a plateau more than 6,000 feet high, long mountain ramparts stretching in the distance on either side.

For its name San Miguel de Allende is indebted to a cavalry captain, a leader in the independence movement of the early 1800's which eventually led to Spain's overthrow. His home fronts a corner of the pleasant, tree-shaded plaza, opposite an old steepled church that guards the square like an affectionate mastiff. As in the case of Taxco the town, a monument of colonial days, is protected by the federal government. No facade may be altered without permission; repairs must reproduce the original architecture. As a recent concession to modernity, however, the cobbles on the streets rimming the plaza have been replaced by pavement.

Por todas partes: little windows

In tranquil farmland such as this that stretches out from San Miguel one may at last feel he is treading Mexico's native soil. Here, if anywhere at all, the casual visitor learns a little of the reality of Mexico. On country rambles, afoot or mounted, one meets the ever-curious children, their faces little windows through which the foreigner may momentarily glimpse the country's soul. . . . You exchange a word on the road with the small landholder, the farmer, brief in speech like farmers everywhere. In his broad-brimmed hat and clean, ragged trousers, serape on left shoulder, he seems his nation's prototype. At least one would like to think so, meeting his clear gaze, receiving in farewell the old-fashioned benediction: *Vaya Vd. con Dios. . . .* Solemn, unsmiling, the infant contemplates you from the shelter of his mother's *rebozo,* indispensable appurtenance of every countrywoman. Headdress and shawl, shelter from the sun's heat, from the road's dust and the rain's cold, depending so gaily from the erect shoulders of the girls, so handily from the worn shoulders of their mothers, the *rebozo,* among its multitude of uses, makes the snuggest of cradles. Safe in its depths baby nurses in privacy and warm content, leaving mother to deal with the world while yet fending its gaze.

We reined the horse and stopped briefly to let the young mother pass with her brood. Supporting infant and *rebozo* in one arm, balancing a basket of fruit and vegetables in the other, she somehow managed to extend her encircling protection to the two little children clinging to her skirts. Smiling, she encouraged one to offer advice:

—Señora, parece que le hace falta a Vd. otro brazo.

Her smile a little broader, she motioned briefly to the burro trotting behind, saddlebags loaded:

—A'i lo tengo, Señor.

REMARKS OF THE PRESIDENT AT THE SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES, DECEMBER 6, 1960

Mr. Speaker, Members of the House of Delegates:

Exactly three years ago, CMS had prepared in nearly final form a proposed new contract which embodied some concepts different from those in existing contracts. Despite the fact that the proposal was in nearly final form prior to the December 1957 semi-annual meeting of the House of Delegates, no mention of the proposal was made in that meeting. Before the next regular meeting of the House, that proposal became the center of a storm of controversy involving special meetings of county associations and of the State House of Delegates.

According to the method adopted by the House on April 28, 1959 for the Society to act upon a proposed new CMS contract, the House of Delegates would be the last of a long series of groups to receive reports about a proposed new CMS contract. It is not my intention to interfere with the House's wishes with respect to the chronological order for considering a new CMS contract proposal. If, however, the President of the Society were aware that a proposed new CMS contract was about to be submitted to the Society, yet nevertheless failed even to mention the matter to the House of Delegates, it is my opinion that he would be neglecting his duty. Therefore, I shall tell you that a proposed new CMS contract has been developed, and Society representatives have already made the prior review called for in the CMS By-laws.

On November 22, 1960 the Liaison Committee of CMS in joint session with the Society's Liaison Committee enabled the latter to review a proposed new CMS contract prior to its submission to the Council. The proposed "Community Contract" embodies a new concept of determining family service benefit eligibility by the size of the family A family of three would be eligible for service benefits if the family income did not exceed $6000. For the same premium, the maximum service benefit income level for a family of four would be $6500, for a family of five $7000, and for a family of six or more $7500. Of the eight members of the Society's committee, seven expressed support for the new approach and one abstained.

The proposed Community Contract as a whole appears to be an excellent compromise among features desired by various interested groups. All of the physician members of the CMS Board of Directors voted in favor of the proposed new contract and most of the Society's Liaison Committee members expressed support for it. It will soon be received by the Council for consideration and for submission through the various channels set up in April 1959 by the House of Delegates for obtaining the Society's approval of a proposed new contract.

Because there are new concepts and also features developed by compromise in the proposal, it is certain that voices will be raised against deviating from the Society's "original intentions" or "historical objectives." For some of the more youthful of our membership it might be helpful to review briefly some of the attitudes manifested by the Society during the development of a medical prepayment service.

Until the great economic depression of the 1930's, the Society had little or no interest in taking an active part in the development of any medical prepayment service. In 1939, an act enabling the development of medical service corporations was passed by the Connecticut Legislature. The House of Delegates in 1939 appointed a Committee on Prepaid Medical Service. After receiving progress reports for two years, the House in 1941 empowered the committee to proceed with the development of a plan providing prepayment for medical service rendered *hospitalized* patients.

In 1942, the committee recommended that administration of a plan should not be a function of the Society but of an *independent corporation.* In May 1943, the committee recommended a *non-profit plan* and during the year met with county committees and appeared at each of the semi-annual meetings of the county associations.

In December 1943 the House expressed approval of the development of a medical service prepayment plan but said that "it is not desirable to develop a non-profit plan such as was contemplated" (in May 1943) and "a prepaid medical service plan should be developed if possible by a *commercial insurance carrier* with the advice and assistance of the Connecticut State Medical Society."

In May 1944, the House partially reversed its December 1943 opinion by agreeing that a *non-profit service plan* could exist side by side with a *commercial cash indemnity plan* and by saying, "It is even possible that competition in this field under the regulating influence of the Insurance Commissioner might be in the interest of both patients and physicians."

In December 1944, the House recommended the development of "Connecticut Medical Service" with an eleven-member corporate board of directors (four from the Society, four from Connecticut Hospital Service, and three elected by those eight to represent the public and subscribers) to develop a contract to be written on a *cash indemnity basis.* Connecticut Hospital Service had wanted a service benefit type but the Society would support only a cash indemnity type plan which followed in a general way the cash indemnity contracts that had already been worked out by the Society in cooperation with a commercial insurance company.

During 1945 a plan was developed, a board of directors was selected, a complete table of organization and plan of operation were worked out, and a fee schedule was drawn up. However, in 1946 Connecticut Hospital Service informed the Society it was not interested in participating in the plan developed by the Society.

In its 1946 semi-annual meeting, the House accepted its committee's opinion that "a successfully operated plan for medical insurance is not within the capabilities of amateurs, but rather calls for the knowledge and experience of professionals. In other words, we believe that insurance should be written by insurance companies . . . We are convinced that premiums collected as dollars should be paid out in benefits as dollars, not as guaranteed service." The House authorized its committee to examine and to approve, on behalf of the Society, contracts submitted to it by insurance companies licensed to operate in Connecticut.

By December 1947, a fully developed plan including a proposed participating physician's agreement was submitted by the committee and sent by the House to the county associations with the directive that they forthwith hold special meetings for consideration of the plan.

At the annual meeting in 1948, Fairfield and New London delegates voiced support for a non-profit plan similar to that of the United Medical Service of New York and voiced opposition to plans involving commercial insurance carriers. New Haven delegates also supported the limitation to a non-profit organization but wanted a plan similar to Massachusetts Medical Service. Hartford delegates strongly opposed the limitation to a non-profit corporation. After long debate, the House approved the writing of a plan that would include service and indemnity features and that would be written by a non-profit organization, a majority of whose directors must be physicians.

In December 1948, after the Hartford delegation unsuccessfully supported amendments to give physicians majority representation on the board of directors and to free CMS from mandatory affiliation with Connecticut Hospital Service, the plan which became the first CMS plan was approved by the House. In 1949 sale of the plan began with Connecticut Hospital Service (i.e. Blue Cross) handling the operational details. It is well to note that, when CMS was incorporated in 1947, the incorporators were seven citizens, none a physician, all but one of whom were directors of Connecticut Hospital Service. After the House approval in 1948, however, the CMS by-laws provided for 12 directors: six to be physicians nominated by the Council of the Society and six to be nominated by Connecticut Hospital Service.

In October 1953, the agency agreement with Blue Cross was terminated and the nomination and recall rights of Blue Cross with respect to CMS directors were terminated. In February 1955, the recall rights of the Council with respect to its nominees to CMS directorships were deleted from the CMS by-laws by the CMS directors. This latter action followed the moderately stormy introduction of the Preferred Contract.

In 1958 a real storm blew up over the proposal by CMS to introduce the "Connecticut Contract" which involved integration with a proposed comprehensive plan of a commercial insurance carrier. This storm rocked the Society and saw a major turnover in Society officers, delegates, committees, etc., amid newspaper debates damaging to the Society's prestige. The "integrated" contract was withdrawn before it was ever sold.

Then came many discussions as to what percentage of CMS subscribers should be eligible for service benefits. In January 1960, the House entirely discarded percentages as suitable criteria and recommended certain income levels in dollars to CMS with the understanding that these levels would be subject to periodic review. The January 1960 recommended levels were appreciably above those provided in any CMS contract then existing.

The proposed Community Contract, which the Society will soon consider, accepts the January 1960 House figure for a three member family (the average CMS family has 3.4 members) but introduces the new proportionate-to-number-of-children approach and makes certain adjustments in one and two subscriber income levels to conform with actuarial realities.

In this historical review, I have not chronicled every event of interest. Despite the omissions, the brief historical sketch does demonstrate, however, the remarkable flexibility of the Society with respect to medical service prepayment plans. Through ten long years, 1939-48, the Society swung back and forth several times. In the ten year, 1949-58, not only were several new CMS plans launched, but CMS became the fastest growing of all Blue Shield Plans.

There are those who want to pick a particular point of our Society's history and freeze the then officially expressed attitude of the Society as the "original intent," the "historical objective," or by whatever name it is called, to conserve that particular attitude at all costs.

History is not on the side of that type of "conservatism." We must maintain equilibrium with current socio-economic realities or lose our place of leadership. It is healthy to study, discuss, amend, compromise. But don't kill the goose that lays the golden eggs.

John N. Gallivan, M.D.

REPORT OF THE CHAIRMAN OF THE COUNCIL AT THE SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES, DECEMBER 6, 1960

Mr. Speaker, Mr. President, and Members of the House of Delegates:

Since the last meeting of the House of Delegates in April, 1960, the Council has held six meetings. The present membership of the Council is 27, and it is worthy of note that the average attendance at these meetings has been 22. The average length of these meetings has been from three and one-half to four hours, very little of which has been spent on unessential matters. I would point out to the House that many members of the Council also serve on several sub-committees which have required many additional hours of meetings for the conduct of the business of the Society. All of this indicates that the members of the Council are assuming their full responsibilities and discharging their duties at a considerable sacrifice of time and energy.

Among the sub-committees, I would like to mention a few in particular. The By-Law Revision Committee has held several meetings and is in the process of developing a coordinated set of revisions. It is felt that this will be much better than to attempt to introduce them piecemeal. Among these will be the one ordered by the House at its last meeting, in respect to making the physician members of the Board of Directors of the Connecticut Medical Service ex-officio members of the Council without power to vote. We expect that these revisions will be ready for publication in Connecticut Medicine the required length of time before the annual meeting.

The Committee on Opinion Survey finished the work in preparation of the Survey and has consulted with the professional firm in regard to the tabulation and correlation of the results. 1558 questionnaires were returned. This represents only 47% of our membership. It is somewhat disappointing that slightly less than half our members were interested enough to express their opinions on the subjects incorporated in the questionnaire. An analysis of the results will be published when completed.

The Committee on the Relative Value Study is still in the process of struggling with this very intricate subject. The nomenclature phase is about completed, and coding of the procedures is next in order. The Opinion Survey shows that nearly 70% of those who answered the questionnaire are in favor of the Society *adopting* a Relative Value Scale though not necessarily in favor of *using* one at this time.

The Liaison Committee with Conecticut Medical Service has held two meetings, and comments concerning its work will be touched upon later.

The Ad Hoc Committee to consider the relationship of the Society to the Council of New England State Medical Societies has completed its work, and the report and recommendations are before you today for action.

At the Council meeting of May 11, the Council voted that the General Manager should be given the privilege of being recognized to speak, and that he should be given the duty to report concerning the business of the Society at meetings of the Council and the House of Delegates.

At the meeting in June, a resolution on the death of Dr. Creighton Barker, the former Executive Secretary, was adopted and a suitably incribed scroll of this resolution was authorized and was subsequently presented, personally, to Mrs. Barker by President Gallivan at the Council meeting of September 8. In June, the Pension Committee recommended and the Council approved, a payment of a benefit of $250 per month to Mrs. Barker for the remainder of her life.

At this same meeting in June, approval was given to the work of the Joint Commission of the Improvement of the Care of Patients in its study on the nursing resources in Connecticut and its present and future needs, and it was voted to continue the Society's representation on this Commission.

At the June meeting, also, a resolution was presented from the Hartford County Medical Association to the effect that both the annual and semiannual meeting be properly rotated among the major county areas on an equitable basis but that the scientific sessions continue to be held in Hamden. This resolution was adopted.

For some time, there has been discussion of the wisdom and necessity for the Society to employ legal counsel and possibly a legislative agent. A special committee from the Council studied and inquired into this question and, at the meeting on October 23, it was voted to enter into an informal agreement with the New Haven law firm of Wiggin and Dana, which would entitle the Society to designate that firm as its official Counsel but did not involve a retaining fee. Under this informal agreement, individuals, groups, and committees within the Society, needing legal advice on matters of Society business, could request authorization to obtain this advice from Wiggin and Dana by application to the Council or, in urgent situations, by application to the General Manager and/or the Chairman of the Council, the costs of such authorized legal advice to be borne by the Society.

At the meeting on November 16, the Council considered the qualifications of three parties to serve as Legislative Agent, and it was voted to offer this post to Mr. Joseph P. Cooney of Hartford, for the biennium 1961-62, under such terms of performance and reimbursement as are determined to be mutually agreeable.

There have, of course, been a considerable number of other matters considered and acted upon by the Council, some of which appear in the Agenda of today's meeting while the others have all been published in the minutes of the Council as presented in Conecticut Medicine. While these are not unimportant, they do not need further emphasis at this time.

The problems of Connecticut Medical Service and the relationships between that organization and our Society have occupied a considerable amount of time at each Council meeting. In June, the report of a member of the Medical Advisory Committee of the Connecticut Medical Service to his County Board of Governors was referred to the Council. The essential part of this report concerned the proper function and responsibilities of the Medical Advisory Committee and its proper relationship to the Board of Directors of Connecticut Medical Service, the component County Medical Associations, the Council, and the House of Delegates. This precipitated a prolonged discussion, not only at the meeting in June, but also at the joint meeting of the Liaison Committees in July, and at the Council meeting in October. It is believed that there is now a much better understanding as to the responsibilities of the Medical Advisory Committee, and it is fervently hoped that in the future there will be a much more mutually satisfactory working arrangement among the parties concerned.

In August, a special committee of the Council, with representation from the Medical Advisory Committee of the Connecticut Medical Service and the Third Party Payment Committee of the Society, met with the Insurance Commissioner and his staff. This meeting was for a mutual exchange of ideas in regard to the relationship between the Society, Connecticut Medical Service and the office of the Commissioner of Insurance. A preliminary report of this committee, with Dr. Gallivan as Chairman, appeared in the minutes of the Council for August 10. Whether we succeeded in convincing the Commissioner, or any of his staff, that the physicians of the State contribute materially to the success of Connecticut Medical Service and should have a real voice in determining the terms of any new contracts that are issued is very doubtful. We, in turn, learned that the Commissioner can really wield a very potent club over Connecticut Medical Service if he should choose to do so. He and his staff repeatedly stressed the phrase "in the public interest" as being the test by which they gauged the policies and contracts of Connecticut Medical Service; that they are the arbiters of whether the public interest is being adequately served; and that if Connecticut Medical Service does not satisfy them on this score, it could lose its tax exempt status.

The Liaison Committee with the Connecticut Medical Service has held two meetings, one on July 12 and one on November 22. At the first meeting the general discussion of the progress, or lack of progress, on a new contract was discussed. In addition, a considerable amount of time was also spent in attempting to clarify the role of the Medical Advisory Committee.

The meeting on November 22, however, marked a real advance in progress. This meeting was devoted almost entirely to the "prior review" of a new contract to be called "The Community Contract," as provided for under the By-Laws of Connecticut Medical Service. It was the individual opinion of all the Council members of the Liaison Committee that this Contract was about ready to be presented to the Society for action under the procedures as set up by the House of Delegates in April, 1959. There remained some minor details to be added and some modifications to be presented to the Medical Advisory Committee for their consideration before it will be complete. It seems probable that this Contract may be presented for our consideration early in 1961.

At this same meeting, we were made acquainted with proposed amendments to the Preferred Contract which would add some new benefits and go far towards correcting a considerable number of the inequities felt to be present in the Preferred Contract. It was agreed, without dissent, that these changes do not constitute major changes for the following reasons:

1. They do not alter the Service Benefit levels.
2. They do not increase membership rates.
3. They do not change Participating Physicians' Agreements.
4. They do not curtail services or reduce payments.

It was further agreed that, after consultation with the Medical Advisory Committee concerning some modifications of their recommendations, the approval of the Insurance Commissioner be requested promptly.

Another major item that has come to the front is the Medical Care of the Aged. In August, Congress passed the Kerr-Mills' Bill which set up a joint Federal-State program for helping to finance medical care for those over 65 who were in need of such assistance. At the meeting of the Council on September 8, Dr. Thomas Feeney was selected as Chairman of a special committee to develop plans for the administration of this program in Connecticut. His Committee consists of the Society's Committee on Third Party Payments, in addition to Dr. I. E. Blodinger of New Haven, Dr. Kenneth F. Brandon of Hartford, Dr. James R. Miller of West Hartford, Dr. Ellwood C. Weise, Sr. of Bridgeport.

The first meeting of Dr. Feeney's Committee was held in New Haven on September 27. Present, in addition to the Society's Committee, were representatives from the Connecticut State Dental Society, the Connecticut Hospital Society, The Connecticut Pharmaceutical Association, the Connecticut Chronic and Convalescent Hospital Association, Connecticut Blue Cross, Connecticut Medical Service, the Aetna Life Insurance Company, the Connecticut General Life Insurance Company and the Travelers Insurance Company. A second meeting was held on October 26, and a third one on November 30 of representatives from these same groups, and various possibilities of implementing this program in Connecticut are being explored.

At the same meeting of the Council, Sept. 8, the President of the Society and the Chairman of the Council were instructed to seek an early conference with Governor Ribicoff to discuss the Medical Care of the Aged program in Connecticut and to inform him of the formation of this Committee. This meeting was held in Hartford on September 29 and we not only offered the full cooperation of the Society in this project, but also indicated we hoped we would be allowed to take a very active part in the development of any program. He stated that he did not intend to call a special session of the legislature to act on this matter since he felt the legislation was entirely inadequate and undoubtedly would be superseded by much more far-reaching legislation at the next session of Congress. He stated his intention to appoint a committee to work with the Commissioner of Public Welfare concerning it, and would appoint an official representative from the State Medical Society to such a committee. We requested him to appoint Dr. Feeney as our representative. Announcement of this committee was made this past week.

At the October meeting, it was brought to the attention of the Council, through a resolution of the Connecticut State Joint Council to Improve the Health Care of the Aged and also from members of the Society who served on the Advisory Committee to the Connecticut Commission on Services for Elderly Persons, that the report of the Commission recommended financing medical care of the aged through the Social Security mechanism and that this was not in agreement with the majority report of the Advisory Committee Sub-committee on Income Maintenance. The latter, by vote of 9 to 2, recommended that qualified older people who need assistance in meeting their medical care costs should receive such assistance through a State-administered program similar to the Kerr-Mills' Bill recently enacted into Federal law.

The concern of members of the Joint Council and the Society was that since their names were listed in the report as having participated in its preparation, it might be interpreted at the 1961 White House Conference on Aging that this was also their recommendation, which it is not.

The Council voted "to authorize and request members of the Society who serve on the Connecticut Advisory Committee for the White House Conference on Aging, to take such steps as may be necessary to formulate a statement which will reflect the opinion of the Advisory Committee with respect to the financing of medical care of the aged." It was also voted that this report, when completed, be filed with the Governor and be transmitted to the proper agency in Washington for consideration at the 1961 White House Conference on Aging.

Dr. James R. Miller has been asked to implement this vote after consulting with other members of the Society who served on the Connecticut Advisory Committee.

This report of the actions of the Council is respectfully submitted.

RALPH L. GILMAN, M.D.

REPORT OF THE GENERAL MANAGER AT THE SEMI-ANNUAL MEETING OF HOUSE OF DELEGATES, DECEMBER 6, 1960

Mr. Speaker, Officers of the Society and Members of the House:

In last Sunday's New York Herald Tribune, Mr. Stuart H. Loory recorded some impressions he received from his attendance at the meeting of the American Medical Association in Washington, D. C. Titling his column "Why Has The Doctor's Public Image Changed?", Mr. Loory writes in the opening paragraph: "It used to be that the image of the doctor was of a kindly old gentleman quick to grab his black bag, hitch his horse to the buggy and go flying off into the cold, snowy night to treat an ailing patient."

In drawing this traditional picture at the outset, Mr. Loory is following the popular trend among many contemporary writers, in that he conveys the impression that this should also be the image of the doctor today. But as appealing as it may be to those of us who remember "the good old days", I think we will all agree that the public image of the doctor in 1960 could not possibly be the same as it was in grandma's day except that there would seem to be no obvious reason why he cannot be as kindly a gentleman as he ever was. Entirely too many changes have taken place in the world since the turn of the century for today's physician to practice in the father-image of old.

For example, his horse and buggy have long since been replaced by the automobile which, itself, has undergone a series of radical transformations during the past fifty years. No longer can the relatively unskilled car owner keep it in good running condition as a do-it-yourself project, armed only with screwdriver, oilcan and nail file. The modern vehicle is most complex and requires a host of trained specialists to keep it performing at the level of efficiency and comfort which we all have come to expect. It costs more to buy, more to operate and more to maintain in sickness and in health.

Similarly, modern American medical care no longer consists of merely feeling the pulse, inspecting the tongue and dispensing definitive treatment from the cluttered contents of a little black bag. It is true, of course, that the doctor-patient relationship continues to be of the utmost importance, but contemporary medical practice has assumed a drastically different, new pattern in which the patient and the physician of his choice find themselves at the center of an ever-expanding circle of diagnostic and therapeutic services. The pharmacist, the nurse, the medical technician, the modern hospital facility and even the third party payment agency now surround the two in their traditional situation.

Almost unbelievable advancements in the medical sciences and marked changes in our national socio-economic structure have brought about this modern concept of the circle of medical care and there is really no place in this picture for the "horse and buggy" doctor with his limited knowledge, his limited training and his limited tools. Today's medicine, like today's automobile, is more complex, more efficient and, regrettably, more costly than was the case only a few decades ago. This is a sign of the times—a manifestation of both progress and inflation—and is no more peculiar to health services than to any other field of enterprise.

But, Mr. Loory goes on: "Today the image of the same physician is that of a high-living man who stays at home, counting his money. . . ." while, as the editor of Harper's Magazine recently said: "millions of people are bitterly dissatisfied with the medical care they are getting."

Now we have no way of knowing which of these gentlemen and their journalistic colleagues is reporting factually on the American medical scene and which of them is merely recording his own opinions, but one has only to thumb through the magazine or newspaper nearest at hand and he will find material of the same stripe. This purposeful crusade to destroy the proper image of the American medical man and his associates also reflects the times in which we live, and whether we are businessmen, lawyers, physicians or whatever, he who fails to recognize the true meaning of the repetitious picturing of the doctor as a greedy, incompetent charlatan is indeed blind to reality. This is the technique of subversion, practiced not only abroad by overt communists and socialists but also at home by so-called liberals who are determined that the free enterprise system shall perish and be replaced by the welfare state in America. And let no one believe that this propaganda is being beamed only at those who provide health services. Addressing the Rotary Club of Philadelphia recently, Mr. G. Frederick Roll of Smith, Kline and French Laboratories called the Kefauver drug hearings "Trial by headlines". Noting that the senator's tactics had "made eminent jurists, lawyars and legislators shudder", Mr. Roll issued a warning to all businessmen. "You must anticipate", he said, "the day when your turn will come in Washington. To prevent trial by headlines you must start now to build public understanding of what your business is doing for the public good. . . . and teach the American people to recognize unfounded and outrageous accusations."

Although doctors are not thought of primarily as businessmen, we should certainly hasten to respond to Mr. Roll's warning. There has been a general failure of almost all individuals and agencies which operate under free enterprise to inform the public of the system's proven merits; of how valuable to each American is the right to choose between alternatives; of how precious freedom is in any sphere of human activity. Belatedly, many people are coming to recognize that current attempts to bring government control to medicine is but a symptom of a far more deep seated disease; that it is but a surface manifestation of a sickness which is being spread across the land by undeclared enemies of the American way of life. It is infecting our schools and our universities where children are being surreptitiously instructed in the joys of collectivism and the welfare state while being left in collosal ignorance of the principles which have made this country great. Surely it is no accident that, among groups of our young people it is considered "corny" to be patriotic and that for far too many of them the words of the Pledge of Allegiance are just so much mumbo-jumbo.

This is indeed a serious situation and one in need of prompt and effective correction. The medical profession must certainly do its part and we pray it will. As we have said, the "horse and buggy" doctor has passed from the modern scene but in addition to his kindness and human understanding, we will all be wise to retain another important virtue he possessed. History shows that the physicians who were our predecessors in this country were also militant Americans, who stood and fought for freedom and individual liberty for themselves and their children. They strongly influenced public opinion by saying what they thought—to their patients, to their politicians or to anyone else with whom they came in contact. They did not approach the issues of their day in a retiring "hat in hand" manner nor did they "respectfully submit" their thoughts to their listeners with a timid request that they be given some consideration. These men were more than doctors—they were citizens—and they carried out both assignments to the very limits of their ability. In all conscience, can we do less?

We may as well face up to the fact that the day has passed when the public responsibilities of the medical profession can be adequately discharged by wiring a polite message to Washington, D. C. once or twice a year. Such limited effort on our part may have sufficed in times gone by but certainly not any more.

During the past eighteen months, many of us have been in frequent contact with our Connecticut representatives in the Congress, both in person and through many, many legislative mailings. We did not attempt to propagandize these gentlemen at all. Rather, we presented them with a great many facts and figures pertaining to the medical situation of the aged in our state and tried to convey to them our carefully considered attitude in this vital manner.

We were encouraged by their action in voting for the Kerr-Mills Bill even though we knew that in most cases there was little conviction in their yea vote for the measure to which we gave our support. We were therefore not surprised that in the political campaign which followed the short post-convention session, our incumbent congressmen ran on a platform which promises all things to all people, including "free" medical care to the aged under Social Security. They did not mention the Kerr-Mills Bill in their speeches except to disparage it. Conversely, their opponents largely ducked the issue altogether and for this reason, among others, in most cases were unsuccessful in their bids for office. Our Governor has left little doubt as to his position on this issue and, as you know, has just been appointed to the important post of Secretary of Health, Education and Welfare.

There is no question but that we will be forced to resume a vigorous exchange of paper bullets with most of these gentlemen and their adherents in the very near future. They will continue to represent that all people over 65 are practically paupers and we will mail them copies of surveys which indicate that most oldsters are reasonably secure financially. They will continue to deplore the grave lack of medical care for the aged and we will offer evidence that no such lack exists. They will again allege that older people can neither obtain nor afford health insurance and we will report that over 80% of Connecticut's senior residents already possess varying degrees of medical expense protection. And so forth and so on.

The outcome of this seemingly endless struggle for freedom in the practice of medicine remains uncertain, but of one thing we can be sure. Beyond inflicting a few minor flesh wounds, much of our ammunition is destined to be wasted if it is projected only toward our re-elected Congressmen. Having voted for the Kerr-Mills Bill as a political expedient, they have since promised to support a Forand-type program at the next session and apparently have no intention of giving Kerr-Mills a reasonable chance to demonstrate either its worth or its inadequacies.

It is quite evident that we must seek elsewhere if we are to enlist effective support for our position and by this I do not mean organizational support alone. A Congressman is morally obligated to represent the people in his district who elected him. He is expected not only to offer leadership to his constituents in important aspects of national and international life but also to reflect their opinions. It would seem logical, then, to conclude that medicine's case must be taken to the people—directly, truthfully and in a foreceful manner. To do this will not be easy. There are over two million people in the state, most of whom are grossly uninformed as to just what would be at stake if the management of their medical care were to be transferred from their doctors to their congressmen. To communicate to the public as well as to its legislative representatives must be the number one undertaking of the Society and its members during the coming year, for surely the price of freedom in medicine and in many other fields of American endeavor will reach an all time high if the 1960 Democratic platform is submitted to the Congress as an actual program for legislative action.

The ultimate scope of this urgently needed communications program is far too great to permit detailed definition at this time. But let us consider just one concrete example of its potential. Later this afternoon, you will be asked to approve a resolution outlining a certain position to be taken by physicians and their colleagues in pharmacy with respect to the prescribing of generic name drugs. Assuming that favorable action on this resolution is taken, or on some similar resolution, a strong position will have been established in this currently controversial matter which can be upheld against challenge from any source. This position will be affirmative instead of negative and will place the responsibility on those who may make contrary statements to prove validity, instead of on the medical profession to disprove it.

But the public will know little of this action if it is recorded only in the archives at St. Ronan Street. Nor will the public understand what this position means nor, indeed, even what generic name drugs are if this is the final disposition of the matter. On the other hand, if in cooperation with the Connecticut Pharmaceutical Association an informative booklet on this subject were to be prepared for distribution to thousands and thousands of patients through pharmacies and doctors' offices, then at least a sizeable segment of the public would have a better basic understanding of the subject and be in a better position to evaluate proposals which pit the quality of medication against its cost.

A comprehensive approach of this sort toward meeting the responsibilities of the Society to the public is embodied in the concept of a "Connecticut Medical Community" which has been developed by Jim Burch, our Director of Public Relations and Communications, and is presently under consideration by the PR Committee. When its possibilities have been thoroughly explored by the committee and when joint arrangements with allied health agencies have been set up for possible implementation, it is to be hoped that the Council and the House of Delegates will see fit to back this proposed net work of professional and public communication in health matters to the limit and to offer the full resources of the Society in providing it with both leadership and active participation.

In closing, and to emphasize the basic theme of this report, I offer you this brief anecdote which seems to be appropriate.

A very prominent surgeon recently addressed the graduating class of the medical school he had attended. Recalling his boyhood and early years as a student, he described the great interest he had had in the history of the United States and the American form of government.

"But my parents were so determined that I should become a physician", he said, "Every time they caught me studying my favorite subjects, they took the books away and insisted that I spend my time learning biology and chemistry. It's been that way all my life—never a moment for anything but science."

"And so that's how you became such an outstanding doctor?", inquired a member of the audience.

The surgeon replied, "On the contrary, young man, that's how I became such an ineffectual citizen."

—William R. Richards, M.D.

REPORT OF AMA DELEGATE AT THE SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES, DECEMBER 6, 1960

Mr. Speaker, Members of the House of Delegates:

This is a report of the Washington Clinical Meeting of the American Medical Association held in Washington, D. C., from November 28th, through December 1st. Specifically, this is a report of the business meetings of the House of Delegates during this Clinical Meeting. The House of Delegates convened on Monday, November 28th, 1960 at 10 A.M.

The first day, Monday, was spent in accomplishing the order of business of the House; the second day in attending the many reference committee hearings where the thirty resolutions proposed by the House were discussed along with those proposed by the Board of Trustees, the Councils and committees of the A.M.A. and which following House approval had been forwarded to the suitable reference committees for discussion and action; the third day was used by the reference committees to complete their reports and finally in the afternoon and early evening the House reconvened and took action on the reference committee reports.

Your delegates arose every morning at 6:30 to 6:45 A.M. in order to attend the daily breakfast discussions in conjunction with the delegates from the other New England States. These meetings were most fruitful and broadened everyone's scope of knowledge on regional problems of medicine. Also, through these daily meetings, we could keep each other apprised of happenings which no single group could do otherwise.

At its opening session the House followed the usual order of business, such as the preliminary report of the reference committee on Credentials, which showed 202 members present from a total of 209, who were privileged to have seats in the which showed 202 members present from a total of 209, who were privileged to have seats in the House of Delegates. The remarks of the Speaker of the House, Dr. Norman A. Welch, in addition to other things, emphasized that all members of the American Medical Association are welcome to attend the reference committee hearings, and they are encouraged to express themselves on matters before the Committees.

The address of President E. Vincent Askey, was timely and challenging. He stressed that the A.M.A. "founding goals to promote the *art* and *science* of medicine, and the betterment of public health are as important in 1960 as they were 114 years ago." He stated that the "passage of the Mills-Kerr Bill in the recent Congress demonstrated the success of the months of intensive work by the A.M.A., state and local medical societies, and the individual physician; as well as by the strong allies and many dedicated Congressmen and Senators of both parties. The job was well done, but the fight is a continuing one to prevent federally-controlled medicine." *He strongly urged the House of Delegates to charge all county and state medical associations with the responsibility of providing the local medical leadership necessary to implement the Mills-Kerr Bill as rapidly as possible.*

The reference committee commenting on Dr. Askey's speech repeated the statement adopted at the June, 1960 House of Delegates Meeting in Miami Beach; "Personal medical care is primarily the responsibility of the individual. When he is unable to provide this care for himself, the responsibility should pass to his family, the community, the county, the state, and only when all these fail, to the federal government; and then only in conjunction with the other levels of government in the above order. The determination of medical need should be made by a physician, and the determination of ineligibility should be made at the local level with local administration and control. The principles of freedom of choice should be preserved. The use of tax funds under the above conditions to pay for such care either through the purchase of health insurance or by direct payment, provided local option is assured, is inherent in this concept and is not inconsistent with previous action of the House of Delegates of the A.M.A.

Dr. Askey stressed that our "national medical strength and growth have not come from the federal government and tax spending, but from creativeness, competitiveness, initiative, responsibility, and the dedication of men and women of medicine and science. These are the factors we have relied upon to attain the greatest medical heights in the world." He also stated that as the nation's most resourceful medical organization, our responsibilities to a growing nation, intensely interested in health, have multiplied. "I believe we should support not only existing programs, but also expand these and other new programs, which must be initiated to meet the challenge of our society. Additional funds will be needed, and our individual responsibility is to accept a larger financial share in the best possible A.M.A. program for the public and the medical profession. The expansion of membership in the A.M.A. and in state and county societies is important. We must actively seek to add all those currently outside our ranks; so that we may directly represent the strongest front possible; as we face our responsibilities to the American people."

A scholarship and loan program for medical students, the status of foreign medical graduates, and A.M.A. membership dues increase, the expansion of voluntary health insurance, health care for the aged and new developments in polio vaccine were among the major subjects acted upon at the American Medical Association's Fourteenth Clinical Meeting held in Washington, D. C., November 28–December.

Named at 1960 General Practitioner of the Year was 44 year-old Dr. James T. Cook of Marianna, Florida, who was selected for his dedication to both medical practice and service to the community. Dr. Cook is the 14th recipient of the award.

Mrs. William Mackersie, the President of the Women's Auxiliary, told of the many functions carried on by her organization. The group has 80,000 members, which she considers to be far too few, when one considers the possible number of members. A highlight of her report was the sum of over one-million dollars contributed by the Auxiliary in 1960 for loans and scholarships to medical students.

Remarks were made to the House of Delegates by two ex-officio Delegates of the Student A.M.A. These members were J. H. Keffer and Benjamin S. Park, Jr. The Student A.M.A. has just finished its first decade of growth and development. Delegate Keffer told of the student doctor's awareness of the changing times that bear upon the multifacetted medical profession. He stated that the students are endeavoring to develop channels to serve the needs occurring in all spheres of medicine based on the premise that the individual was responsible to himself, to his profession and to the people.

It was apparent to your Delegate that the student doctor is well aware of the problems facing the medical profession with the many influencing trends and forces being exerted upon it. Their knowledge of the problems of medical care of the aged, military medicine, post-graduate training and in general medicine's problems both now and in the future were ably demonstrated. I would like to quote a paragraph from the lines of Student Park, which had to do with the student's views as they relate to the world around them.

"The watch word of the world today is change. Fifteen years ago there was no such entity as the world opinion that we feel today. No nation or block of nations wielded the power either actually or relatively that is displayed by today's behomoths of political philosophy. This is true of the world, and is no less true of the United States. Domestically there is a very real force, call it trend, call it national opinion, call it what you will, but it is a force from the public that demands action. We, the physicians of tomorrow, are keenly aware of this force. We observe it in action, sometimes appalled by what we see, but sometimes adding our own voices to its strength. Above all, we appreciate the potential of this force to shape the future of the country, and for that matter, the world."

As you see, the student organizations are very keenly aware of the problem of the federal government's place in affairs of medicine. They believe that whatever capacity the federal government will function in regarding medicine is very much their business. Gentlemen, I was much impressed with the scope of the student's knowledge, and their great interest in American medicine, and I think we can all take a lesson from these young men.

Dr. Julian P. Price, Chairman of the Board of Trustees, discussed the reports of the different Councils, as printed in the October 22, 1960 Journal of the A.M.A. Among other things, these reports discussed membership dues, development and marketing of pharmaceutical products, health care of the aged, pension fund for physicians, medical missionaries, study of relation of physicians not in private practice to organized medicine, joint commission on the accreditation of hospitals, retirement and disability program, scholarships and loans, poliomyelitis vaccine, joint commission for pre-paid health and medical service and investment policy guides. All of these items were referred to appropriate reference committees for their deliberation. I think you can see from this broad background the problems encountered by the Board of Trustees and the many problems that the A.M.A. has to cope with.

The annual budget for the A.M.A. was approximately seventeen million dollars last year. As an aside, let me say that less than three million dollars is made up from membership dues, the rest coming from advertising, investments and gifts. As we know, a tremendous amount of work done by the Association is through the unceasing voluntary efforts of the hundreds of doctors, who through their committee commitments, travel this country over to endless meetings doing the work of the Association. The item of travel expense alone for these meetings is somewhat in excess of four hundred thousand dollars a year. The reference committee held discussions on the reports of the Board of Trustees, which covered the fields of annual and clinical meetings, A.M.A. affiliations such as the Commission for Accreditation of Hospitals, Blue Shield Commission, World Medical Association,

U. S. Chamber of Commerce, the National Health Council and others. The Board of Trustees re-emphasized to the House of Delegates and component societies the necessity of suggesting the names of physicians qualified and willing to serve on the various committees and councils of the Association. It was suggested that these names with a biographical sketch be sent to the Executive Secretary, Dr. Blasingame, at the headquarters office, where such a file is maintained for use by the Board of Trustees and the several councils and committees.

The Council on Medical Education and Hospitals presented an Honors Scholarship and Loan Program, which received the approval of this meeting of the House of Delegates. This proposal was adopted by the House of Delegates at its December, 1959 meeting in Dallas. This scholarship and loan program will provide concrete evidence of the A.M.A. sincerity to attract increasing numbers of young people to enlarge the ranks of our profession. In brief, this program consists of two parts: (A) Scholarship awards to outstanding college students who are interested in entering medical school. There will be 50 of such grants given annually throughout the country. The candidates would be selected at local levels with country and state medical societies and individual physicians participating in the selection. This part of the program will cost around three-hundred thousand dollars a year when in full scale operation. (B) The second or loan part of this program will be a mechanism set up through the cooperation of local banks throughout the country, through which medical students may obtain loans at low interest to be paid back in after years, when the doctor is financially able. This will be a revolving type of fund. I would advise every member of this Association to study the provisions of this report, which will be found in a forth-coming Journal of the A.M.A. on the proceedings of the House of Delegates at its Washington meeting.

Other highlights of the report of the Council on Medical Education and Hospitals had to do with the subject of graduates of foreign medical schools serving residency and internship in United States hospitals. In meeting the problem of foreign medical graduates, the House of Delegates adopted a report which included the following statement:

"In order that those foreign physicians who have not yet been certified by the Educational Council for Foreign Medical Graduates might be given further opportunity to enhance their medical education, hospitals would be encouraged to develop special educational programs. Such programs must be of educational worth to the foreign graduate and must divorce him from any responsibility for patient care. Foreign physicians may participate in these programs until June 30, 1961, with approval of the Department of State so that their exchange visa will not be withdrawn before that time. This will also allow the non-certified foreign physician the opportunity to take the April, 1961, Educational Council for Foreign Medical Graduates examination."

In line with the foreign medical graduate situation, a resolution was adopted requesting the National Intern Matching Program to reconsider its decision stating that all Foreign Graduates should be appointed under the National Intern Matching Program by 1962. It appears inevitable that all internes will be under the Matching Program in the future, but it was considered that bringing foreign graduates into the Matching Program at this time would be difficult.

Some of the actions of the House of Delegates were as follows: (1) "The House encourages the various state and local medical societies to promote high school scholarships award programs in their respective areas. Also, the House reaffirmed the A.M.A. support of the Mills-Kerr Bill, and its opposition to any legislation involving the use of the O.A.S.D.I. mechanism for medical care of the aged. *It also urged all state and local medical associations to cooperate with appropriate state officials and to provide leadership in implementing the provisions of the Mills-Kerr Bill.*

The Reference Committee on Insurance and Medical Service had many resolutions to consider; such as "A National Program of Voluntary Health Insurance, Transfer of Coverage of Professional Services from Blue Cross and Insurance Programs to Blue Shield; Maximum Development of Prepaid Medical Care, Government Operated Community Health Program, the Report of the Committee on Medical Facilities and many others."

In discussing medical facilities following a survey of the operating of nursing homes, it was noted that increasing recognition is now being given to need for more medical supervision and planning by part or full time staff physicians, a good patient record, additional training of nursing personnel and rehabilitation and vocational activities. It is recommended that all doctors interested in operations of nursing homes read the report of the Committees on Medical Facilities of the Council on Insurance and Medical Service of the A.M.A. The House of Delegates requested the Committee on Medical Care for Industrial Workers to continue to carry on their studies in setting up the guides-to-fees relationship to medical care plans. The Committee on Medical Practices is preparing to bring together in one meeting representatives of all areas in which relative value studies are in effect. At such a work shop type of meeting, an exchange of method, techniques and application of relative values can be developed to serve each source of information for the future.

Along the lines of improvement and promotion of Voluntary Health Insurance, the House of Delegates directed the Board of Trustees and the Council of Medical Service to assume immediately the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans; the American Hospital Association and the Blue Cross Association into maximum development of the voluntary non-profit prepayment concept to provide health care for the American people; and the House further directed the Board and Council to *assume leadership* by undertaking to coordinate the efforts of private insurance carriers through conferences with their national organizations, and also, where feasible to make efforts to cooperate with representatives of other types of medical plans, other professional groups, and representatives of other types of medical plans, other professional groups, and representatives of industries and labor and the public at large.

A discussion of surgical assistance fees being developed in schedules of illnesses by health insurance companies and prepayment plans was discussed, but the whole subject was referred to the Board of Trustees for appropriate study.

Concerning a resolution for transfer of coverage from Blue Cross and insurance plans, which has been the subject for deliberation over the years, the House favored that the A.M.A. urge all constituent associations to take special action as may be deemed necessary to effect the transfer of professional services from Blue Cross Plans and all other hospitalization plans to Blue Shield or that section of insurance plans providing for professional services wherever such situations exist.

In discussing medical care for the aged, many policies were enunciated. Most of them were reiteration of the Associations principles for many years. A fundamental in these policies is the *care for the sick individual at local levels.* There are so many provisions in these policies that every member of the Association is encouraged to read the report of the Council on Medical Service, which will be fully published in the Journal of the A.M.A. in the near future. Finally, the House recommends that (A) The additional funds authorized under Old Age Assistance be used to improve existing medical programs for the needy aged; or if O.A.A. programs are adequate these funds be used to begin M.A.A. Program and they not be used to replace state financing of existing welfare or to replenish general funds. (B) In medical assistance for the aged, that this new program be supplementary rather than replace individual voluntary health insurance or prepayments and that state medical associations continue to cooperate with Blue Shield and commercial carriers developing appropriate plans for those over 65. The House also reaffirms its recommendation adopted in 1958 that "each state medical association give serious consideration to the use of a voluntary agency, such as Blue Shield or of a specific agency established by the medical society for the administration of such a program.

In discussing the payment of physicians, it was pointed out that the fiscal year ending June 1959 showed over two-hundred million dollars in vendor payments for medical assistance to old age recipients, about 10 per cent going to physicians and other practitioners. It was also expressed that even with the growth of government financing of indigent medical care, physicians continue to give of themselves to those unable to pay for their services, particularly to hospitalized welfare patients. In Rhode Island welfare officials estimated that the doctors of the state had provided over one-half a million dollars worth of free care to hospitalized patients on the assistance rolls in 1957. Along the lines of physician payment, the House of Delegates approved, and reaffirmed the physician's right to a reasonable renumeration for medical services, particularly home and office care, rendered to patients for whose care the government has assumed financial responsibility, and recognized the medical profession's right to reduce or fore-go fees for these patients at its own discretion. However, if the profession does reduce or fore-go such fees, the House recommends that the State Medical Associations determine and publicize at regular intervals the extent of fee reduction or the estimated value of services provided without charge both as an instance of the Profession's contribution to community's health and to prevent under estimates of the probable cost of comprehensive medical care at government expense.

Along these policies, regarding the government programs in medical care for the aged, it is important that our state medical association remain informed and active concerning all mechanisms for care of the needy in the state; so that we may be able to evaluate suggestions for changing these programs as they arise.

Members of the Connecticut House of Delegates, I have touched but briefly on the many important phases of activity covered in the recent meeting in Washington. Your other Delegates, Dr. Max Caplan of Meriden and Dr. Norman Gardner of East Hampton, attended all the sessions with me, and many reference committees that I could not attend. Dr. Caplan in particular took an interested role at the Committee hearings having to do with the raising of dues, and the reasons therefore. The dues will be raised $10.00 a year for the next two years, making a total of $20.00 increase in dues. The first increase starts January 1, 1962 and $10.00 additional on January 1, 1963. The House suggested that these funds be used to inaugurate or expand a number of programs including:

1. Financial assistance to medical students.
2. Continuing education for practicing physicians.
3. Health advice to the lay public.
4. Medical research.
5. The expansion by the Communications Division of its program of faithfully portraying the image of the American Medical Association.

It is important, the House emphasized, that the Board of Trustees report recommending a dues increase be transmitted in essence to the grass roots level.

Dr. Gardner was a member of the Reference Committee on Public Health and Occupational Health, and I happily refer all of you who are interested in these topics to our Delegates.

We wish to thank this Society for the privilege of being their Delegates at this and other past meetings, and wish to point out that the success of this and all state medical associations depends on the cooperation of each individual member of the Association in formulating local policies and in truly representing American medicine to all people with whom they come in contact in their daily lives. American medicine, as we know it, can survive only by every doctor knowing what American medicine stands for, and then by doing his part to uphold these purposes.

James R. Cullen, M.D.

Doctor's Office

Joseph J. Bowen, Jr., M.D., announces the opening of an office for the practice of internal medicine and cardiology at 452 Meriden Road, Waterbury.

Leonard R. Frank, M.D., announces the opening of an office for the practice of obstetrics and gynecology at 122 Maple Street, Bristol.

Irving H. Krall, M.D., announces the removal of his office from 99 Pratt Street to 242 Trumbull Street, Hartford.

Marvin Levenstein, M.D., announces the opening of an office for the general practice of medicine and surgery at 1890 Whitney Avenue, Hamden.

Walter C. Murray, M.D., announces the opening of an office for the general practice of medicine at 58 East Main Street, Plainville.

Jack Thomas Orr, M.D., announces the opening of an office for the practice of thoracic and cardiovascular surgery in association with Dr. Joseph B. Cherry and Dr. Henry N. Blansfield at their office on Federal Road, Danbury.

Harold Sofron, M.D., announces the removal of his office from 209 Central Street, to 109 Central Street, Forestville.

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A vine, someone said, is like the human mind—always reaching out for new things to grasp.

PROGRESS...

One way or another people will seek out new ways to cope with old problems. Yet progress must be wisely guided. One doctor says: "The desire of the public to have prepayment medical protection is so urgent that it will buy this protection from whatever plan seems most enticing. Whether you like it or not, prepayment medical care is here to stay. Let us support the system which is voluntary and over which we have adequate control." **BLUE SHIELD**

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Book Reviews

THE CLINICAL USE OF ALDOSTERONE ANTAGONISTS. Compiled and edited by Frederick C. Bartter, Charles C. Thomas, Springfield, Ill. 1960, 211 pp. $5.00.

Reviewed by Irwin S. Eskwith

The launching of drugs considered important by their producers has become as stylized as the old time Hollywood premieres. The manufacturer contacts a group of investigators, preferably some with well known names. These are induced to do some work with the new preparation. After a time the investigators assemble under the guidance of the drug company and present their findings. This is known as a symposium. The latter is recorded and published in toto either in the bulletin of a scientific society, or as in this instance, in book form. This particular volume is sponsored by the G. D. Searle Company and deals with a substance called aldactone.

Aldactone is one of a number of steroids known as the spirolactones. Such compounds inhibit the activity of aldosterone which some investigators feel causes edema, and judging from this book may cause any knd of edema.

The first part of this volume concerns itself somewhat with the pharmacology of the spirolactones. Bartter, in the opening article, suggests that the spirolactones can aid in the diagnosis of primary aldosteronism, although he stops short of a positive declaration to this effect. A paper by Grant W. Liddle suggests sodium excretion is promoted by aldactone only when aldosterone is present. Larragh feels that perhaps the spirolactones can cause water and sodium loss without concurrent potassium depletion, although aldactone is a less effective diuretic than chlorothiazide.

The book is profusely illustrated with some of the most complex and ununderstandable diagrams that have ever been gathered together under one cover. These metabolic charts may intrigue their authors but they are extremely boring to the reader. It is refreshing to read Gold's comment that he doesn't intend to discuss electrolyte loss, but only weight loss, and to see his simple illustrations.

The most encouraging articles in the book are two dealing with the therapy of Laennec's cirrhosis. Morrison reports on eighteen patients, fifteen of whom became edema free after therapy with aldactone and another diuretic—either merraluride or chlorothiazide. Aldactone by itself, however, was not diuretic. There is a short article by Hoobler dealing with the effects of aldactone in refractory congestive failure. One case is presented and even here unwarranted conclusions are drawn. Friedberg's discussion of the spirolactones is a brighter feature in this volume. He questions the exact relation of adosterone to congestive heart failure and feels that the use of aldosterone antagonists does not as yet rest upon as firm a foundation as it might.

Indeed, the book fails to make a very strong case for this compound as a diuretic. Further work is necessary for this. The terms primary and secondary aldosteronism are used liberally throughout by all the authors although definitions and characteristics of each, and above all, the differences between them are quickly passed over.

Very few of the articles actually come to definite conclusions and the words "maybe," " perhaps," and "possibly," appear in most authors' papers.

This reviewer feels it would have been more effective if each author had better organized his papers, extending them in some instances. Then publication should have occurred through the usual methods of scientific communication rather than in such a partisan manner.

THE MANAGEMENT OF FRACTURES AND SOFT TISSUE INJURIES by The Committee on Trauma, American College of Surgeons, W. B. Saunders Co., Philadelphia, Pa. 1960, 372 pp. $5.00.

Reviewed by Denis S. O'Connor

This most recent edition of the management of fractures and combined with it the management of soft tissue injuries being the work of many highly qualified minds on the subjects considered in this handbook is of great value to the medical student, as well as the active practitioner, because it is not the opinion of a single invidual but rather the distillate of the thinking of many.

The first 136 pages are devoted wholly to fractures and in simple language the conservative measures which have survived the test of time are outlined for ease of application by anyone who is faced with fracture problems.

Part two of about equal length approaches the issue of soft tissue injuries covering all areas of the body and all types of injury as well as the complications of acute trauma.

To cover the whole subject of fractures as well as acute soft tissue trauma in 372 pages would appear to be impossible but it may be safely stated that if every practitioner of medicine concerned with trauma was thoroughly familiar with the contents of this little volume, the care of the traumatic case would be on a much higher plane than at present.

Because of the splendid organizational arrangement of the contents, adequate attention to all phases of the subjects considered, the absence of extraneous material and the sound surgical principles of treatment given, this book should be the official textbook on trauma for the medical student and the hand book for the practitioner.

This book can be recommended without qualification.

ON THE HISTORY OF MEDICINE by Henry E. Sigerest, M.D. Publications, Inc., New York, 1960, 313 pp. $6.75.

Reviewed by Grover F. Powers

This anthology of occasional essays and lectures by Henry E. Sigerest, eminent medical historian, is well worthy of reading and study by all persons having professional interest in the broad field of the art and science of health-history, science, education and behavioral and social relationships. The book is also, in a limited way, an autobiography of one whom some would regard as a modern renaissance man. For although the title of the book is "On the History of Medicine" the volume in the words of its editor (Felix Marti-Ibañez, M.D.) "contains the soul of a man, who like a crusader for humanism, lived serving an ideal and died hoping for it." And Dr. Sigerest himself said "what I wrote I have lived, and it has enriched my life so tremendously that I thought others might benefit of all I have read."

The book covers a vast field and only an author of great intellectual curiosity, profound scholarship and with tremendous concern for his fellow man could write so learnedly on so imposing an array of subjects germane to health and man's achievements relevant thereto.

The book is divided into four sections as follows:

On Medical History.
Ancient and Medieval Medicine.
Renaissance, Baroque and Age of Enlightment Medicine.
Personal.

There are five to nine chapters in each section, 313 pages in all. Some of the chapters of special interest to the reviewer are the following:

The Physician's Profession Through the Ages.
The Social History of Medicine.
Bedside Manners in the Middle Ages.
Living Under the Shadow.
University Education.

The chapter on "Living Under the Shadow" tells of Dr. Sigerest's reactions to his own three incurable illnesses.

As a medical teacher the reviewer would call special attention to the chapter on "University Education." It would be desirable and valuable reading for all college and university students to emphasize the intellectual labor which real scholarship demands. For Dr. Sigerest this was truly a labor of love and joy and rich fruitfulness!

CURRENT SURGICAL MANAGEMENT II. Edited by J. H. Mulholland, E. H. Ellison, and S. R. Friesen. W. B. Saunders Company, Philadelphia and London, 1960. 348 pp. $8.00.

Reviewed by Mark A. Hayes

In the modern era of medical practice in the broad sense which, of necessity, must include surgery, authoritarian attitudes are unwelcome and stifling. This book edited by distinguished surgeons is the natural sequel to its predecessor by extending and amplifying important controversies in everyday surgical care of patients. This reviewer found the volume equally as refreshing as the first one. It is somewhat satisfying to know that the great experienced surgeons of our profession are no more in agreement than each of us in his own mind when confronted by a puzzling problem. Complacency is a serious deterrent to progress. I would like to cite a few examples from this stimulating publication:

What's good for a duodenal ulcer? Palmer et al. want to irradiate the stomach. Berne et al., Scott et al. and Wangensteen are completely unable to convince one another what portion of the upper gastrointestinal tract should be discarded.

Moyer has a staunch defender here in Ackerman who deprecates any pertinent relationship between large bowel polyps and cancer. Ripstein, however, advises a subtotal colectomy for a clinical condition which doesn't seem to excite the St. Louis physicians very much. Boston lends its support to Ripstein by Colcock's report from the Lahey Clinic.

We never will know what to do for carcinoma of the head of the pancreas, strictly speaking, until adjacent sites of origin are excluded from current reporting. Rhoads wants to cure and Williams holds for palliation only. What an enigma!! How am I to know what to do for the benefit of my patient?

Retained common duct stones still annoy surgeons and will continue to plague them as long as operative cholangiography is used as the only diagnostic criterion for exploration (see Baker et al, vs. Ferris).

The heretical practice of primary closure of the common bile duct appears to be possible in the lands of Edwards et al., but the time honored use of the T-tube is advocated strongly by Doubilet.

Mulholland, dissatisfied by primary repair of bile duct structures, tilts courageously in the lists with Cattell and presents a good case for choledochojejunostomy.

I have selcted only a few samples of the stimulating fare found in this exciting volume. It goes on to cover early versus late operation in intestinal obstruction, what is the proper treatment for carcinoma of the breast, how to manage acute renal failure, and more.

That this book is truly an honest presentation of controversies is apparent from my inability not to take sides in the review.

Read, enjoy and decide.

SIGHT—A Handbook for Laymen by Roy O. Scholz, M.D., Doubleday & Co., Inc., Garden CiCty, New York, 1960, 162 pp. $3.50.

Reviewed by R. M. Fasanella

Dr. Scholz is to be congratulated on the really fine job he has done in discussing sight in a language that can be understood by the layman.

I personally feel that every successful ophthalmologist is, of necessity, a teacher even if he is not connected with a university or teaching center. Everyday he must describe the detailed and precise workings of a small wonderful organ called the eye and explain it in "baby talk" to his patients whether they are the laborer or the professional man. Dr. Scholz's clear, concise language makes "Sight" pleasant and easy to read.

The first chapter on basic facts, the chapter on children's eyes, that on glaucoma and cataracts, and the glossary are especially well done.

For those ophthalmologists who must explain the complex pros and cons of operating a cataract in one eye with normal vision in the other eye, for those ophthalmologists who must write a detailed insurance report or appear in court to describe an eye problem, this book is invaluable. Likewise for the patient who is being told about this problem, for the insurance adjustor or for the lawyer, judge, or member of the jury who wants to know the simple facts about an eye problem, this understandable language gives a clear insight.

FUNDAMENTALS OF CHEST ROENTGENOLOGY by Benjamin Felson, M.D., Professor and Director, Department of Radiology, University of Cincinnati College of Medicine, W. B. Saunders Co., Philadelphia, Pa., 1960, 301 pp. $10.00.

Reviewed by Robert M. Lowman

Engagingly written and designed to whet the appetite of every reader, this volume will no doubt find its deserved place on the shelf and in the hands of all physicians who are interested in the study of the chest. Written in a style that makes the reading of the book a pleasurable experience, its presentation is succinct, logical and incisive. The approach to the study of various lesions is a directed one and many fundamentals concerning various techniques and diagnostic approaches are surveyed and presented. These are so presented in a manner that can only serve to aid the physician and radiologist in the evaluation in any type of lung lesion.

To the physician interested in the evaluation and the elaboration of chest problems, Dr. Felson has developed chapters which survey the extent of the lung lobes, the distribution of the bronchi, the patterns of the collapse of the lobes, the changes produced by alteration in vascular patterns and a wide variety of anatomic variations. The chapter discussing the special roentgen signs in which the diagnostic implication of the double lesion sign, the patent bronchus sign, the sign of pulmonary meniscus, the notch sign, the vallecular sign, the Butterfly shadow and the significance of eggshell calcifications is excellent.

While it is true that some of the material has been partially developed by other investigators, the presentation of the roentgen aspects by Dr. Felson is both able and excellent. Some may react to the mixture of the sparkling responses elicited by Dr. Felson from his children, but most readers I am certain will greet the interludes with enthusiasm.

The type selected is easy to read and adds to the enjoyment. The illustrations are beautifully reproduced and "make their point." The bibliography will serve as a guide to those who wish to pursue some of the subjects in more detail. Dr. Felix Fleischner who is often quoted in this volume by Felson has privately indicated that he has considered the book a most excellent addition to radiologic literature.

Portions of the book have been surveyed by various residents in radiology and each of them has not only considered that the book is worthwhile, but have lamented that it was not published earlier. While often a resident will react to the high price of books most have considered that this volume will be a worthwhile purchase.

What then is the value of this volume? It is an excellent book, and viewed objectively and used wisely it shall do much to elevate the quality of chest film evaluation. Certainly these fundamentals should be a "must" reading for the radiologist be he a first year resident or a seasoned "pro." For the internist or the physician engaged in chest survey studies, the cluster of Felson "pearls" should prove to be enormously enticing. Again this is an excellent book and I hope that I can convey the enthusiasm that reading this book has engendered in the reviewer to other readers.

Letters To The Editor

Re: Hormones and Breast Cancer

November 14, 1960

Dear Dr. Nahum:

Despite many advances in recent years in the therapy of cancer, metastatic breast disease remains one of the pressing problems facing physicians. Radiation with its direct action on metastatic cells is extremely valuable. Alteration in the hormonal milieu of the patient has also proved valuable in palliation. The mechanism of action of hormones is unclear but experimental studies indicate a possible relationship to changes in cellular enzyme systems.

Androgens and estrogens have been utilized extensively but difference of opinion exists among investigators as to which preparation is the one of choice. A recent report of the Council on Drugs of the American Medical Association suggests superiority of female hormones over androgens. Unfortunately this study lacks complete validity because of its retrospective designg, lack of statistical randomization of patients studied, and dependence on the investigator alone (without review) for evaluation of remission of disease. The basic problem—which preparation to use—unfortunately remains unsolved.

The Cancer Chemotherapy National Service Center of the National Institutes of Health several years ago established a program to evaluate hormonal preparations for use in metastatic breast cancer which would avoid many of the pitfalls noted in the A.M.A. study. This program has been quite successful in evaluating many preparations, some of them valuable, others of little value. More preparations need to be studied to find a better hormone than now is available and to solve the problem of estrogen vs. androgen. Only within the framework of such a study, which has been established and is continually policed by trained statisticians, can any valid conclusions be drawn.

Connecticut has been represented in the N.I.H. program since its inception by a group of physicians working at the Yale University School of Medicine. The Cancer Coordinating Committee of the Connecticut State Medical Society has endorsed the program and through the cooperation of physicians in the state many patients have been helped. This program is of the utmost importance and must continue if progress against metastatic breast cancer is to be made. Any post-menopausal woman (natural or castrate) with progressive metastatic breast carcinoma is eligible for the program. Physicians may contact me at Yale, Locust 2-1161, Extension 482, for further details and for referral of patients.

Ira S. Goldenberg, m.d.

Special Notices

Nelson K. Ordway, M.D., Professor of Pediatrics, Yale University School of Medicine, will speak on "Assessment of Development in Children" at the Pediatric Conference, Hospital of St. Raphael, Tuesday, January 24, 1961.

AUTOMOTIVE CRASH INJURY RESEARCH ANNOUNCEMENT

The Connecticut-Cornell Automotive Crash Injury Research program which has received statewade support by physician members is currently concerned solely with injuries sustained in 1960 and 1961 model passenger cars involved in accidents investigated by the Connecticut State Police. Continued cooperation and support is urged. This information is of vital importance as a means of measuring the effectiveness of the latest safety design modifications and the possible influence the trend toward lighter weight cars may have upon the injury pattern in accidents.

The doctors who in the past have been called upon to participate by submitting brief medical information on the nature and extent of injuries sustained in accidents falling within the scope of the study are to be commended. This joint endeavor with state police, hospital groups and doctors in 19 other states and 5 major cities makes possible this unique approach to help combat the national problem of highway fatality and injury.

MEETING OF MEDICAL-DENTAL STAFF OF NEWINGTON HOSPITAL FOR CRIPPLED CHILDREN

Monday Evening, February 13, 1961
7:30 P.M., Auditorium
"Myelomeningocele, Diastematomyelia, and Syringomyelia—One Disease?"
W. James Gardner, M.D.
(Cleveland Clinic, Cleveland, Ohio)

HARTFORD HOSPITAL

Saturday Morning 11 O'clock Guest Speakers
January 7 to March 25, 1961

January 7—Drs. Butler, Stolman and Coy. Subject: The Medical and Dental Problem of Periodontal Disorders.

January 14—John R. Paul, M.D., Professor of Preventive Medicine. Yale University School of Medicine. Subject: The Present Status of the Oral Vaccine for Poliomyelitis—"The Dwight Griswold Memorial Lecture."

January 28 (Three Day Visiting Surgeon) Jan. 26, 27, 28—Frank Glenn, M.D., Professor of Surgery, Cornell Medical College. Subject:

8:30 to 10:00 A.M. Conditions of the Cardiovascular System Amenable to Surgery.
10:00 to 11:00 A.M. Surgical Grand Rounds.
11:00 to 12:00 NOON Surgery in the Aged.

February 4 (Feb. 3 & 4) —Louis Weinstein, M.D., Professor of Medicine (Infectious Disease), Tufts University School of Medicine. Friday, Feb. 3—Pediatric Ward Rounds & Conference, Pediatric Service. Saturday, Feb. 4, 11:00 A.M. —Subject: Management of Infectious Disease.

February 11—Alan F. Gutmacher, M.D., Chief of Obstetrics & Gynecology, Mt. Sinai Hospital, New York City. Subject: 10:00 A.M., Multiple Pregnancy; 11:00 A.M., Conception.

February 18—Charles A. Flood, M.D., Associate Professor of Medicine, Columbia College of Physicians and Surgeons. Subject: Esophagitis.

February 25—Benjamin Spector, M.D., Professor of Bio-Anatomy, Tufts University School of Medicine. Subject: Embryology at the Bedside.

March 4—William H. Sweet, M.D., Chief of Neurosurgery, Massachusetts General Hospital; Harvard. Subject: Radioactive Isotopes in Diagnosis and Rx of Brain Tumors.

March 11 (Three Day Visiting Surgeon) Mar. 9, 10, 11—James D. Hardy, M.D., Professor of Surgery, University of Mississippi. Subject:

8:30 to 10:00 A.M. Circulatory Collapse: Dx and Management.
10:00 to 11:00 A.M. Surgical Grand Rounds
11:00 to 12:00 NOON Problems Following Gastric Resection.

March 18—William J. German, M.D., Professor of Neurosurgery,Yale University School of Medicine. Subject: The Management of Head Injuries.

March 25—David Seligson, M.D., Associate Professor of Medicine & Director of Clinical Laboratories, Yale University School of Medicine. Subject: The Acidosis of Uremia.

New Kidney Syndrome Causes High Blood Pressure

A newly-discovered kidney ailment which causes high blood pressure and can be corrected was described in the current Journal of the American Medical Association.

The disorder should be added to the group of known and reversible causes of arterial hypertension, heart enlargement, and heart failure, according to Dr. Charles H. Scheifley, Mayo Clinic, Rochester, Minn.

The disorder is an arteriovenous fistula, an unnatural connection that develops between the artery entering the kidney and the vein coming from that organ.

Dr. Schiefley said the condition creates a characteristic and, if sought, easily heard murmur which facilitates diagnosis.

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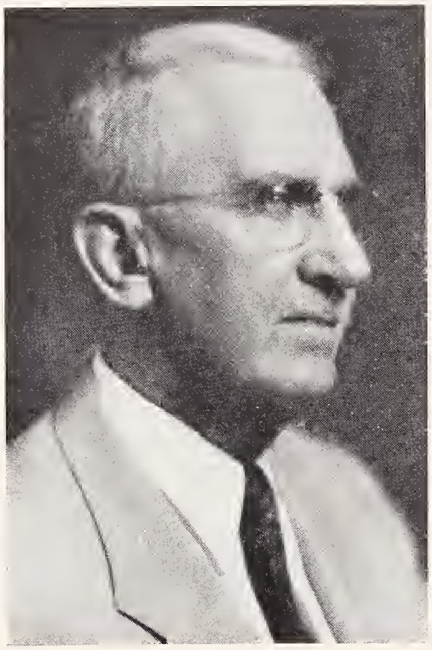
Obituaries

Harry Bigelow Hanchett
1879 - 1960



On September 20, 1960, at his home, on Town Farm Road, after a long and consuming illness, one which he faced fearlessly, with courage, and patience; one of our best known physicians and surgeons passed from the Connecticut scene. Dr. Harry B. Hanchett was born in Torrington on December 13, 1879, son of Dr. Thatcher S. and Emma Hayes Hanchett and practiced medicine and surgery in Torrington from 1906 to 1953. He was graduated from the Torrington High School in 1901 and from Jefferson Medical College in Philadelphia in 1905. Following his graduation he served an internship at the Jersey City Hospital for one year and began his practice in association with his father in 1906.

In this association with his father, the late Thatcher S. Hanchett, who was a very capable and respected physician, and who was the first medical examiner to be appointed to that position when the Medical Examiner Act was passed many years ago; the younger Dr. Hanchett helped to carry on a vigorous medical and surgical practice with considerable emphasis on traumatic industrial work. It was while under the tutelage of his father and in the highly individualistic medical climate of those early years prior to the existence of hospital facilities that Dr. Hanchett's innate talents developed and flourished. He soon became recognized both by his medical confreres and by the community as possessing exceptional firmness, clear thinking, sound judgment, and unusual mechanical and technical skills.

He played an active role and was a key figure in the founding of the first hospital in Torrington, the Charlotte Hungerford Hospital, and for many years since its inception was an Attending Surgeon and Chief of Staff. He did much to organize the Medical Staff of this institution and to help guide its destinies. He worked continuously and assiduously to improve medical standards and service for the community. It was the establishment of the hospital that gave Dr. Hanchett an opportunity and an impetus to utilize his skills in their proper environment so that he soon became recognized as one of the leading surgeons in the community.

Dr. Hanchett's affiliations and honors were many. He was a Fellow of the American College of Surgeons; a member for over fifty years and a former Vice-President of the Connecticut State Medical Society; a former President and for many years Secretary-Treasurer of the Litchfield County Medical Society; a former Vice-President and Director of the Connecticut Health Association; a charter member and President of the Torrington Medical Society of 1939; Health Officer for the Town of Harwinton; a member of the Staff of the Waterbury Hospital; Medical Examiner for Torrington, succeeding his father and serving in this capacity until he retired from this position in 1951; President of the Torrington Rotary Club in 1937; State Guard Surgeon in 1941; and Selective Service Examiner in World War II and in recognition of this service was presented with an Award of Merit by the Federal Government. In recognition of his more than a half century as a physician and surgeon he was honored with a medal presented at a meeting of the Connecticut State Medical Society.

During the many years he was Secretary-Treasurer of the Litchfield County Medical Society the Fall meetings held at his summer cottage on the shores of Bantam Lake are legend. Many medical notables from all over the State of Connecticut and beyond attended these meetings with anticipation and fervor. The air of informality, the good fellowship, the gracious hospitality of the hosts, and the scientific papers presented at these meetings are long to be remembered.

Dr. Hanchett was a descendant of a pioneer colonial family, his ancestors having been deeded a tract of land in Salisbury by the Crown in pre-Revolutionary days. His ancestral line has been traced through records to the Crusaders through his great-grandmother who was a Thatcher. The Thatchers were related to John Winthrop one of the first Governors of Connecticut. On July 8, 1908 Dr Hanchett was married to Miss Caroline Allen of Torrington who survives him.

With the passing of Dr. Hanchett also passed a representative of a changing era in which medical practice, at first, was a highly individualistic one; when medical practitioners depended very largely on their five senses and their personal medical experiences for sound clinical judgment and treatment; when laboratory aids were few and in many instances non-existent; when the medical armamentarium and surgical procedures and techniques were rather limited in scope; but an era which rewarded the medical practitioner of that day with the satisfaction of close personal ties between patient and physician and an era which stood at the threshold of a spectacular and unprecedented vast and rapidly accelerating development in the scientific field. Dr. Hanchett, while having begun his practice in this era, kept pace with the changing times.

Many of us remember his unusual capabilities; his firmness; his dry humor; his sacrifice of time and effort for his patients and community; the gentle sway of his rolling gait; his slow and deliberate speech; his kind smile; and the comforting word to his patients, all will long be remembered and cherished in the hearts of those he left behind.

Michael E. Giobbe, m.d.

Victor William Higgins
1898 - 1960

Dr. Victor W. Higgins of Essex died suddenly in Elkins Park, Pennsylvania on November 13th, 1960. Death was attributed to Coronary Occlusion.

He was born October 1st, 1898 in Brooklyn, N.Y. and received his preliminary education in the local schools and at Columbia University. He entered the Long Island College of Medicine, graduating in the class of 1924. Internship training at St. Johns Episcopal Hospital, Brooklyn and the Government Department of Health Hospital on Ellis Island preceded his residency training at Jamaica Hospital in Queens County, N. Y.

During his years of active and successful private practice in Hollis, he was associated with the Jamaica Hospital, the Mary Immaculate and Queens General Hospitals.

He was particularly interested in the diseases of the Gastrointestinal tract having taken special courses in this field.

In 1938 he moved his home and office to Essex, Connecticut, where his practice was limited to internal medicine.

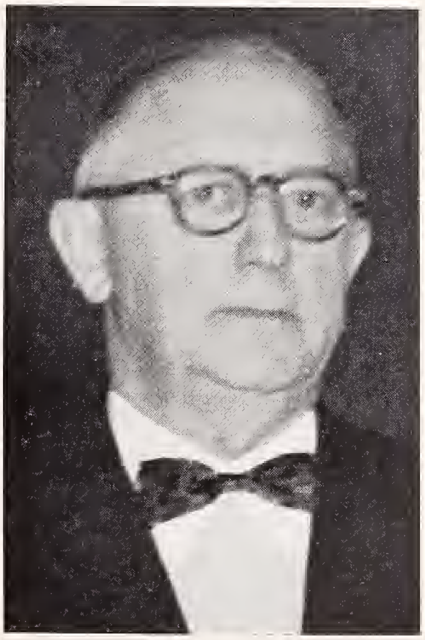
He is survived by his wife, the former Nellie Neide; a son, Donald M. Higgins, by his former marriage; and four grandchildren.

Victor was a kindly person possessed of a keen sense of humor. He was devoted to his home and family.

His chief hobbies were horseback riding, music, and travel. The loyalty, admiration and respect of his patients testify to his character and ability.

Augustus Harris, m.d.

Arthur August Johnson, M.D.
1890 - 1960



Arthur August Johnson, a native of Waterbury, the son of Gustave A. and Martha (Semrow) Johnson, born February 26, 1890, died on September 12, 1960.

Dr. Johnson attended the local schools and was graduated from Crosby High School with the class of 1910. In the fall of that year he entered Cornell University to prepare for a career in the practice of medicine. He transferred to Yale University in 1912, and from there to the College of Physicians and Surgeons of Columbia University in New York in 1915, and received the Degree of Doctor of Medicine in 1917. After a course in Obstetrics at Sloane Maternity Hospital, he entered the Methodist Episcopal Hospital in Brooklyn, New York, for a one year rotating internship. Following this, he enlisted in the Army Medical Corps with the grade of first lieutenant and was so commissioned July 1, 1918. He saw no foreign service, being assigned to Mobile Unit No. 100 and Debarkation Hospital No. 3 as a ward surgeon in the operating unit. During his Army services he took courses at the Bellevue and Allied and Presbyterian Hospitals in New York City, and a three-month service in the Army Surgical School at the Mayo Clinic, Rochester, Minnesota.

On Armistice Day, November 11, 1918, Dr. Johnson married Helen Farnham of Waterbury in St. John's Protestant Episcopal Church in the same city.

Being honorably discharged from the Army in 1919, he returned to his native city and entered into private practice in which he was eminently successful. Membership in the Waterbury, New Haven County, and Connecticut State Medical Societies and Fellowship in the American Medical Association were granted him in 1919. He was elected secretary and later president of the first-named organization.

His hospital affiliates began with appointment to the courtesy staffs of St. Mary's and Waterbury Hospitals in 1923, and two years later he was advanced as associate surgeon on the staff of the latter institution. He was further advanced at Waterbury Hospital in 1938 to the position of attending surgeon, which he held until his death. Upon the reorganization of the staff of Waterbury Hospital in 1948, he was elected director of surgery, which office he held for three years. He was then chosen to be the second chief of staff under the new program in 1951, and served in this capacity in 1952 also.

Further recognition was given him when in 1932 he was made a Fellow of the American College of Surgeons, and in 1952 he was elected to the International Academy of Proctology.

He was an ardent Rotarian and member of the Masonic Order, and was a past president of the Physicians' Association of the Sphinx Temple of the Mystic Shrine.

Among Dr. Johnson's hobbies were travel and photographic recording of his trips as well as hunting and trout fly fishing in which he was an expert and authority. His travels took him to surgical meetings in Sao Paulo, Brazil, Oslo, Norway, England, and other European countries as well as to many places in his own United States.

His was a straightforward friendliness, as he maintained a keen and loyal interest in his many friends, patients, and hospital, and in the latter's policies and development.

PAUL R. WOHLGEMUTH, M.D.

In Memoriam

Beach, Charles T. — Hartford; Yale University School of Medicine, 1905; born in Chester, England, Dr. Beach studied at the Royal Infirmary of Edinburgh, Scotland, the Pasteur Institute of Paris, and the Klinische Krankheit of Vienna; he was a past president of the Hartford Lions Club, member of the Hartford Cinema Club, and served as a vestryman at Trinity Episcopal Church for many years; died at Hartford Hospital December 8, age 81 years.

Beatman, Israel — Hartford; Tufts College Medical School, 1927; an orthopedist, Dr. Beatman practiced in Hartford for more than 30 years; he was a member of the medical staffs at Mt. Sinai Hospital and McCook Memorial Hospital, Hartford; he served as a member of the Hartford Jewish Federation, the Masons, the Hartford Zionist District and a number of other organizations; stricken suddenly ill at the New Britain Courthouse, November 30, where he was waiting to testify in a trial, Dr. Beatman was pronounced dead on arrival at the New Britain General Hospital; he was 60 years of age.

Modest Increases in Blue Cross Rates Approved

Recently approved by State Insurance Commissioner Alfred N. Premo, certain increases in Connecticut Blue Cross group rates averaging 13.4 per cent became effective February 1.

Modest increases for the Extended, Comprehensive and Standard group plans cover approximately 800,000 members. The rate adjustments do not apply to the additional 400,000 Connecticut people who hold non-group membership.

The new monthly rates, with present rates listed in parenthesis, are as follows: Extended Plan—individual $3.70 ($3.00) and family plan $8.70 ($7.80); Comprehensive Plan—individual $3.10 ($2.80) and family plan $7.30 ($7.00); and Standard Plan—individual $2.40 ($2.20) and family plan $5.70 (5.10).

Under the new rate structure, the husband-wife contract of the Comprehensive Plan will now be at the same rate as the family plan. The premium charge for the husband-wife contract has been $5.60. In making the announcement, Commissioner Premo said Blue Cross records show that payments for members in the husband-wife category equal the hospitalization expense under the family contract.

On July 1 the non-profit plan for hospital care had submitted to the Insurance Commissioner a request for group rate increases which averaged approximately 20 per cent and stated such an increase could be expected to hold for three years. At that time Blue Cross officials said the Plan anticipated losses during 1960 of over one half million dollars and projected losses as high as $2,000,000 in 1961 if rates were not adjusted.

The Commissioner stated that the schedule of benefits for each of the three group plans would remain the same, except that maternity coverage for the Comprehensive Plan was being increased from $100 to $125, the same as is allowed under the Extended Plan and Blue Cross' non-group benefit programs.

"In view of the rising cost of hospital care," said Commissioner Premo, "we feel satisfied that Blue Cross has done an excellent job. The increase for the group Extended Plan is the first in more than five years and it is the first for the group Comprehensive Plan in more than eight years. The rates for the group Standard Plan were adjusted 3½ years ago."

Examination of Foreign Medical Graduates Subject of Yale Symposium

Discussion of the mandatory examination of all foreign medical graduates before they are certified to practice in the United States highlighted a symposium November 23 at Yale Medical Center, New Haven. The program was sponsored jointly by the Connecticut Hospital Association, the Connecticut State Medical Society and the Yale University School of Medicine.

Dr. Dean F. Smiley, executive director of the Educational Council for Foreign Medical Graduates at Evanston, Ill., defended the testing as a means of "safeguarding the American public from inferior medical care." He added that although there had been a steady decline in the percentage of students passing the exams, the last test showed "an encouraging rise."

The examination program, in effect two years, has the backing of the American Hospital Association and the American Medical Association. As of December 31, only those foreign medical graduates who have been certified will be allowed to treat patients.

Dr. Smiley said foreign graduates can help themselves by becoming more familiar with testing procedures and by reviewing modern texts in fields in which they are not working. Hospitals can help, he added, by developing review courses.

The speaker estimated that there are more than 15,000 foreign-trained students practicing in 6,000 U. S. hospitals. One-third are from the Far East, principally the Philippines. The smallest number, at present, are from Europe, which is closest to the standards of American training.

Other speakers at the symposium were Dr. Orpheus J. Bizzozero, Director of Medicine and Postgraduate Education at Waterbury Hospital; Dr. John C. Leonard, director of Medical Education, Hartford Hospital; Dr. Alex Burgess, director of medical education, Miriam Hospital, Pawtucket, R. I.; and Dr. George J. Robertson, Thayer Hospital, Waterville, Me.

Dr. Arthur Ebbert, Jr., associate dean of the Yale School of Medicine, introduced the program.

High Blood Pressure Prevalent in India, China

High blood pressure, contrary to popular belief, is prevalent in India and China, according to a physician who has practiced in both countries.

Dr. Frederick G. Scovel, now of Stony Point, N. Y., said hypertension was "very common" among the 48,429 inpatients seen at the hospital of the Christian Medical College at Ludhiana, Punjab, India, from 1950 to 1958.

Dr. Scovel, who headed a mission hospital in China for many years, added that "hypertension is also prevalent in China, although the average range of blood pressure is probably lower than in the United States."

A nine-year survey of diseases encountered at Ludhiana is contained in the current Archives of Internal Medicine, published by the American Medical Association.

High blood pressure of undertermined cause was "frequently found in both sexes, often with obesity," Dr. Scovel said.

"Most of these patients were in the fifth and sixth decades of life. Many were members of well-to-do classes, although these comprised a small percentage of our patients as a whole.

". . . it may be conjectured that this was the result of industrialization and increased tempo of life."

A majority of these patients also showed evidence of hardening of the arteries by the time they came for treatment, Dr. Scovel continued, and the fact that most were middle-aged "points to an early development" of the disease.

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Bagassosis: Industrial Disease Of Growing Importance

Bagassosis, a pneumonia-like disease previously considered rare, today was described in the Journal of the American Medical Association as "an industrial disease of growing importance."

The disease, first recognized in 1937, is a respiratory disorder caused by the inhalation of the dust of bagasse, the dried sugar cane fiber left after the sugar is extracted from the cane.

Writing in the current J.A.M.A., Dr. Howard A. Buechner of New Orleans said: "Bagassosis can no longer be looked upon as a rare medical curiosity but must now be regarded as an occupational disease of considerable importance, representing a potential hazard wherever sugar cane is grown and bagasse is utilized for manufacturing purposes."

There are many unexplained aspects of bagassosis. One puzzling feature was the absence of the disease in some of the breat cane-growing areas of the world, such as Cuba, Argentina, Hawaii, the Philippines, and Puerto Rico.

Dr. Buechner said the disease is now known to have resulted from contact with bagasse produced in the United States, Italy, India, and Puerto Rico, and there is reason to believe that the disease also has occurred in other cane-producing areas but has gone unrecognized or unpublicized.

From personal observation of cases in Louisiana, Dr. Buechner said that few, if any, resulted from contact with moisture-laden bagasse immediately after it is produced by the cane-grinding operation, or from exposure to the freshly baled material.

"It is only after the baled bagasse has been stored outdoors and allowed to undergo thorough dehydration, and perhaps degradation from the effects of heat and exposure, that it apparently becomes capable of producing disease," he said.

"While this premise may not completely explain the geographical distribution of the disorder, since some sugar factories have apparently rehandled stored bagasse without ill-effect, it is the best answer to the puzzle which can be supplied at the present time."

An outbreak of the disease in Puerto Rico supports this theory. Dr. Buechner said 80 workmen at a new plant producing paper from bagasse in Arecibo, P. R., developed the disease.

"Interestingly enough, all of the patients had contact with the area where bales of stored, dried bagasse were being broken." he said.

Commenting editorially, the Journal said bagasse is being used more extensively for manufacturing purposes, adding: "There now appears to be little doubt that this illness will continue to occur in widespread areas of the world as the industrial use of bagasse is expanded."

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CONNECTICUT MEDICINE

Connecticut State Medical Journal

Volume XXV FEBRUARY, 1961 Number 2

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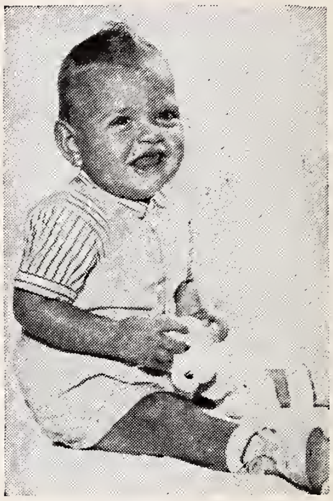
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BORN: Baltimore, Maryland, February 19, 1885

DIED: Hanover, New Hampshire, October 3, 1959

EDUCATION: B.A. 1903, Johns Hopkins University; M.D. 1907, Johns Hopkins University School of Medicine

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- Assistant Resident Pathologist, Johns Hopkins Hospital, 1910-13
- Associate Resident Pathologist, Johns Hopkins Hospital, 1913-17
- Pathologist, City Hospital, Baltimore, 1910-17
- Pathologist, New Haven Hospital, 1917-32
- Presiding Officer of Governing Board, New Haven Hospital, 1932

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    - Associate and Associate Professor, 1910-17
- Yale University School of Medicine
    - Professor of Pathology and Bacteriology, 1917-25
    - Anthony N. Brady Professor of Pathology, 1925-30
    - Emeritus Professor, 1950-59
    - Dean, 1920-35
    - Associate Director, Institute of Human Relations, 1931-35
    - Chairman, Department of Bacteriology, Pathology and Public Health, 1931-33
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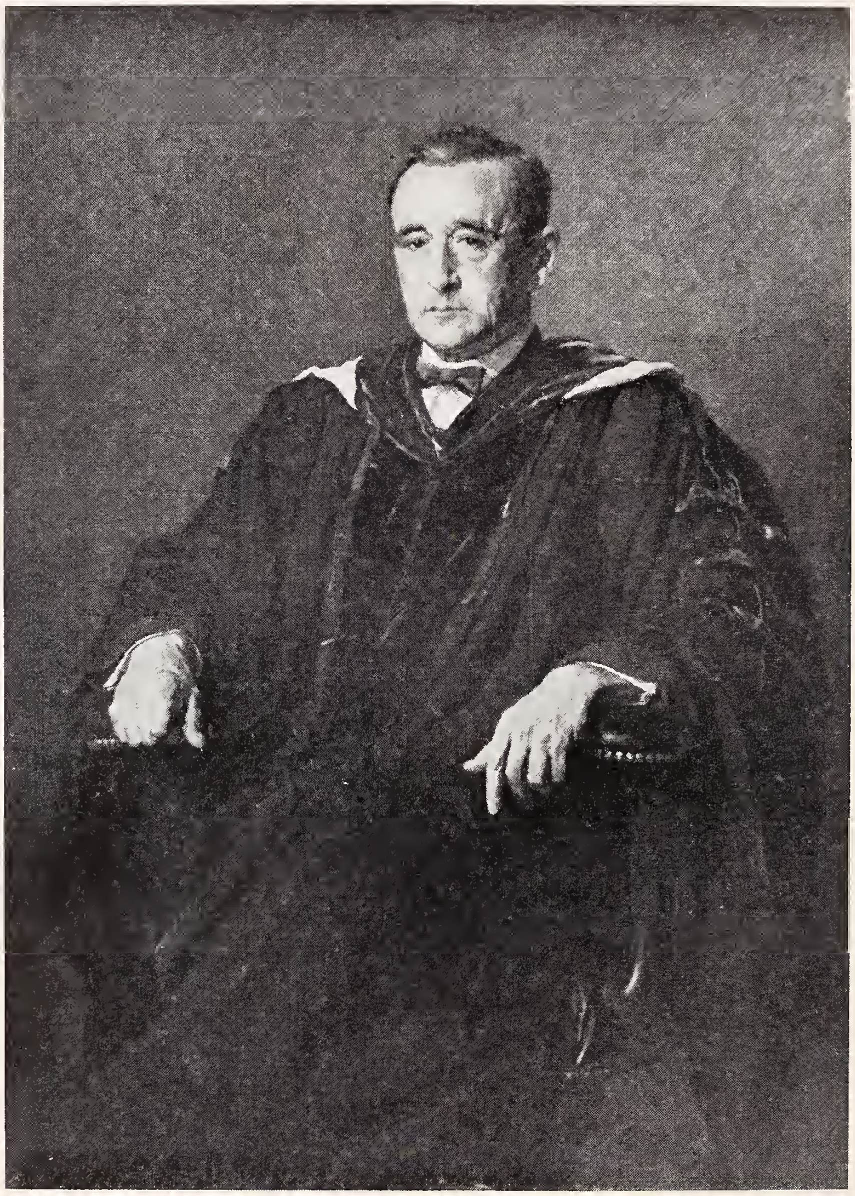

Courtesy of Yale University Art Gallery

Milton Charles Winternitz

MILTON CHARLES WINTERNITZ
1885 - 1959

We do not imitate—but are a model to others.
—Pericles

This issue of CONNECTICUT MEDICINE is dedicated to the memory of Milton C. Winternitz. There is little doubt that in 1920 when he assumed the office of Dean of the Yale School of Medicine, things began to smoulder and finally caught fire with bewildering rapidity. There came into existence a new conception of medical teaching and the role of a university in education. The importance of preventive medicine and public health, the need of introducing psychiatry into undergraduate instruction, the neurological study unit, the atypical-growth research unit, the dental study unit, the School of Nursing and the grand concept for the Institute of Human Relations were all brought into actuality. These arms of medical study reaching out into all directions, medical, psychological, sociological and economic, were outgrowths of a grand design, "Yale will study man—total man."

In 1932, part of the design had taken concrete form in the magnificent structure, The Institute of Human Relations and The Sterling Hall of Medicine. Young men of extraordinary promise were assembled on the faculty and were given freedom from the distraction of practice to pursue investigation, teaching and aiding the community. This was a mutation in medical genetics and the replication now produced a new form. But what is more, there was introduced into the genetic material an agent greatly accelerating change in education and in practical application.

His philosophy of teaching has penetrated all over the world. "Universities should be interested primarily in providing opportunities for learning, not in giving instruction. Teaching need enter only so far as there is failure to learn. A university should protect learning against the inroads of teaching or methodology of all sorts." Translated into action, this philosophy led to the freedom of the Yale Plan for medical education. The students have done well under this system which has turned out to be the least neurotogenic and the most inspiring of all methods in medical education.

The inspiration which guided his work is epitomized in the inscription over the portals of the Brady Laboratory of Pathology: "Here is the place where death rejoices to be of aid to life." He quickly saw that, to be of aid to life, pathology must become less of a descriptive and more of an experimental science and that new disciplines must be combined with morbid anatomy to make pathology a living science. I had two experiences which showed his reaching out into other areas to revitalize pathology. How does pathology alter physiologic function? Accordingly, Hoff and I undertook a series of lectures to the pathological section on pathophysiology. On another occasion, he was studying hemorrhages in the walls of arteries induced by bilateral ureteral ligation. Was he satisfied to study merely the section of arteries? No, he was taking electrocardiograms of his animals and when they appeared strangely altered, I was called over to study them and to report that they showed potassium poisoning. This led him into introducing chemistry, biochemistry and physics into his pathology.

His staffing of Connecticut hospitals with well-trained pathologists and his peopling Connecticut communities with well trained physicians have had an enormous impact upon the health and welfare of our citizens, an effect which has yet to be told in detail.

Some thought that Milton C. Winternitz was an inflammatory agent causing "rubor, calor, turgor, and dolor," on contact. If he was, it resulted from his constant probing which was motivated by his desire to produce an alert class which was also derived from his belief that to stimulate thinking was the essence of a good teacher. There is no doubt that he opened wide the minds of those he influenced.

It must not be forgotten that "Winter" did not end his scientific career when he left Yale but proceeded to Washington and produced beautifully organized monographs on influenza, war gas poisoning and arteriosclerosis, and later, a *Fasciculus on Chemical Warfare Medicine* and a magnificent *Atlas of Tumor Pathology.* He created two active centers for the exchange of scientific information, the Chemical-Biological Coordination Center and the Bio-Sciences Information Exchange.

No one epitomized more truly the words of Pericles "We do not imitate—but are a model to others" than did Milton C. Winternitz.

Louis H. Nahum

REFLECTIONS ON THE PROBLEMS OF HUMAN EXPERIMENTATON

L. G. WELT, M.D., *North Carolina*

ONE of the vivid impressions of my first years in medical school was the statement inscribed on the walls of Dr. Winternitz' autopsy rooms which, when translated from the latin, stated that this was the place where death rejoiced in serving the living. Then and now that statement has seemed to be both noble and beautiful; and surely there is no need to document the far-reaching consequences of the orderly, systematic study of disease in the autopsy room. No less noble, however, are the opportunities for the living to serve the living in the study of physiology and disease. Observations in isolated physico-chemical systems, investigations of the behavior of individual cells and subcellular particles, and experiments upon animals all yield highly significant and important data which, when intelligently analyzed, provide insights into both normal and pathologic physiology. Despite the inestimable value of these approaches, there remain questions whose answers can only be determined in humans. It may be profitable, therefore, to attempt to segregate and analyze the problems that are inherent in the acceptance of the principle that human experimentation is a valid activity in our society.

This essay will address itself particularly to the moral and ethical problems, but let us deal quickly with the legal questions. It will immediately become apparent that although it is a common activity, experimentation on patients really has no legal status. Ladimer[1] points out that the laws of each of the states is "uniform in holding that a person practices medicine if he holds himself out as being able to diagnose, treat, operate, or prescribe for any disease, pain, injury, deformity or physical condition of a human being if he either offers to, or undertakes to perform any of these services. The assumption of any of the four functions of the physician constitutes the practice of medicine." Strictly speaking, then, experimentation is not included among the four functions which constitute the practice of medicine. On the other hand medical practice is really understood by many to include research; and, furthermore, this research is well supported both by private and governmental agencies which, in turn, implies that it has the approval of the community.

In point of fact there are many instances where it may be impossible to draw a clear line between practice and experiment or research and, as is so true with so many problems, there is a large area of shades of gray between the black and the white. It is obvious that in the course of development of any remedy for any disease there had to be a "first time"; and in the sense that there was a first time the remedy must have been clearly different from that which constituted the usual practice in the community. Within a matter of twenty-odd years, sulfonamides were substituted for type specific antiserum in the treatment of pneumococcal lobar pneumonia; and the sulfonamides were later replaced by penicillin and many other agents. Evarts Graham experimented when he performed the first successful removal of a carcinoma of the lung. The cardiovascular surgeons are currently performing "firsts" at an amazing rate, and a large and expensive cooperative cancer chemotherapy research activity is operating throughout the country supported by public funds through a governmental agency. Each of these are, and many, many more can be cited as, experiment, investigation, and research. Although information about new drugs may be available with respect to acute and chronic toxicity from studies in animals, there is always the possibility that the human might respond differently owing either to differences of species or by virtue of the disease he may have; although a plastic ball can be encased in a frame to function successfully as an aortic valve in a dog, there were obviously risks of unknown magnitude when it was first introduced into a human. Thus each of these experiments carries a risk and the patient who accepts the risk is gambling. However, there is an important element which is an essential feature of a gamble and that is that the patient has something quite worthwhile to *gain* as well as to lose. Thus, well considered, carefully studied, new therapies for sick patients directed at the cure or amelioration of their illnesses are obviously and implicitly acceptable. Fundamentally, they are directed toward the immediate welfare of the patient and as such come within the confines of the definition of medical practice. This is not to condone ill-considered, poorly reasoned attempts at new remedies without appropriate study to insure a minimum of risk and a maximum promise of value to the patient. This particular area of human experimentation is not devoid of moral and ethical problems, but so long as its employment may provide real possibilities of benefit to the patient there is little argument concerning its proper place in our society.

A much more difficult set of problems is presented in studies which involve patients or healthy

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subjects in experiments wherein the individual per se has no reasonable chances for gain aside from the satisfaction that may be derived from a sense of service to society, or more mundane gains in the form of reimbursement in cash, or, in the case of prisoners, the possibility of reward in the form of privileges or parole. There is no serious doubt that experiments of this category on humans are important if we are to advance our information and understanding of physiology, pathology, disease prevention, cure, or amelioration. Nevertheless in each instance the person involved is subjected to a risk. Furthermore, the risk is not even a good gamble since the subject has nothing to gain except perhaps money or some other value mentioned a moment ago. In some instances the risks are vanishingly insignificant. In defining an experiment McCance[2] went so far as to state that the unnecessary weighing of a baby would have to be considered an experiment. The risk includes the possibility that the attendant might drop the baby. Certainly the risks are minimal if we take some blood from a large number of people of all ages and each sex to establish the normal value for the concentration of some substance in serum. At the other extreme there are studies in which the risk is more substantial and is illustrated by cardiac catheterizations, percutaneous biopsies of vital organs, exposures to extremes of environmental stresses and others too numerous to mention. Furthermore, it is not a simple task to evaluate and anticipate all aspects of the hazards involved. There is always the possibility of an atypical response, e.g. anaphylactic shock following the intravenous injection of a material usually considered innocuous; or the possibility of contamination, or the problems of the ultimate effect of certain agents, or small doses of radioactivity, or the dangers of accidents such as the use of the wrong drug or the incorrect dose of the drug.

The dilemma one faces, then, is the recognition on the one hand that human experimentation where there is no immediate benefit to the subject involved must continue; and on the other hand recognizing that this must be attended by known and unknown perils. The problem is one of attempting to define the principles which should guide the clinical investigator in the pursuit of his valid occupation. The development of a code is most difficult, and it may be impossible to prepare a document which is neither too restrictive on the one hand nor abysmally ambiguous on the other.

There is of course a set of rules which were established in relation to the Nuremberg trials of the Nazi war criminals. Despite the fact that this set of rules was carefully developed by able men, they too tend to be restrictive and ambiguous. Nevertheless, they are at the moment the most seriously considered public code governing human experimentation and it is important to examine this briefly so that the problems can be focused even more sharply.

Rule 1. "The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior forms of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. This latter element requires that before the acceptance of an affirmative decision by the experimental subject there should be made known to him the nature, duration, and purpose of the experiment; the method and means by which it is to be conducted; all inconveniences and hazards reasonable to be expected; and the effects upon his health or person which may possibly come from his participation in the experiments. The duty and responsibility for ascertaining the quality of consent rests upon each individual who initiates, directs, or engages in the experiment. It is a personal duty and responsibility which may not be delegated to another with impunity."

There are, no doubt, a small number of subjects, perhaps the investigators themselves, who may be properly qualified to grant consent in terms of the quality of consent which is demanded here. However, in many instances it is certainly impossible either to evaluate the risks this precisely or to communicate with the subject in such a fashion that he freely sees the problem in all the dimensions that are necessary for proper consent. This is true even for a particularly well-informed group, the medical students, from which many subjects are obtained. Furthermore, it is impossible to be certain that a very subtle form of coercion doesn't operate between the clinical investigator and the medical student. Let us turn to a less subtle problem and inquire how this rule is to apply to the mentally ill and yet research in this area is compellingly important. What about the subject in the pediatric age group who not only cannot give his consent in terms of understanding but is protected by law so that he is unable legally to consent? Does the guardian of a mentally deranged patient, or the father of a child have the moral right to consent to risks which he, the guardian or father, is not to experience?

Rule 2. "The experiment should be such as to yield fruitful results for the good of society unprocurable by other methods or means of study, and not random or unnecessary in nature."

It is surprising that the Nuremberg tribunal would have included the phrase "for the good of society," since this can be so readily translated into actions wherein the "ends justify the means," and to a frame of reference wherein the inherent rights of the individual are jeopardized in the interests of the society or the state. As for other aspects of this second rule, I suppose that it was meant to state that experiments should be well designed; but the proscription against the random and unnecessary experiment seems most undesirable if random can be equated with pilot, and unnecessary with not obviously immediately useful.

Rule 3. "The experiment should be so designed and based on the results of animal experimentation and a knowledge of the natural history of the disease or other problem under study that the anticipated results will justify the performance of the experiment."

Beecher[3] comments on this rule as follows: "But if the anticipated results fail to justify the performance of the experiment, has the investigator necessarily been guilty of wrong behavior? Who can guarantee the success of any new experiment?"

Rule 4. "The experiment should be so conducted as to avoid all unnecessary physical and mental suffering and injury."

This merely asks for civilized and humane behavior.

Rule 5. "No experiment should be conducted wherein there is a priori reason to believe that death or disabling injury will occur; except, perhaps, in those experiments where the experimental physicians also serve as subjects."

It is not clear whether this rule means that such studies may be performed only with the experimentalist as the subject; or whether the fact that the investigator is willing to serve as the subject makes it permissible to use lay subjects as well. One could argue with either interpretation. If the intent is the former, one might legitimately raise the question as to whether lay subjects who are capable of consent of a high quality should not have the same opportunities for risk should they want them. If the latter interpretation is correct the rule is unacceptable because the motivation of the investigator may be overpowering and lead him to an erroneous or, at least, quite different value judgment than that which might apply to the lay subject. In contrast one might more justifiably state that a minimal requirement of any experiment should be the willingness of the investigator to serve as a subject.

Rule 6. "The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment."

It would appear to be most presumptuous for anyone to equate risks with the importance of the problem. Serious errors would be made in each direction. If the history of science teaches us nothing else, it does make clear that no group is equipped to evaluate the ultimate significance of the research of its own time.

The last four rules need little comment.

Rule 7. "Proper precautions should be made and adequate facilities provided to protect the experimental subject against even remote possibilities of injury, disability, or death."

Rule 8. "The experiment should be conducted only by scientifically qualified persons. The highest degree of skill and care should be required throughout all stages of the experiment of those who conduct or engage in the experiment."

Rule 9. "During the course of the experiment the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible."

Rule 10. "During the course of the experiment the scientist in charge must be prepared to terminate the experiment at any stage if he has probable cause to believe, in the exercise of good faith, superior skill, and careful judgment required of him that a continuation of the experiment is likely to result in injury, disability, or death to the experimental subject."

These are each acceptable principles of decent behavior.

Furthermore, it should be emphasized that this criticism of the rules is aimed solely at emphasizing how ambiguous a code can be and how such a lack of precision could be devastating in many ways to the proper development of a research program. Moreover, since these represent the only code developed by a legal tribunal it is assumed that they might have some validity in a court of law today.

Being unable either to define a code nor to accept one that was already available, it was decided to consult with other clinical investigators. A letter was written to every University Department of Medicine in the country seeking answers to the following questions:

1. Does your department or school have a procedural document dealing with problems of human experimentation?

2. What are your personal views concerning the principles which may serve to guide the clinical investigator?

3. What criteria should be satisfied in the creation of the experimental design to assure appropriate attention to the moral and ethical problems involved?

4. Do you think a committee of disinterested faculty should review the experimental design to insure maximum protection for the subject?

Responses were received from 66 departments. Of these only eight have a procedural document and only 24 have or favor a committee to review problems in human experimentation. The discussions of the second and third questions have been interesting and helpful. Since there was no true consensus an attempt will be made to express some of the more prevalent views.

1. Many felt that a procedural document might be a poor idea. This stemmed, for the most part, because it was anticipated that no one can prepare a document which can hope to be more useful than hindering. It was felt by some that a document of rules would place obstacles in the path of legitimate research by responsible investigators, and would provide little or no protection from the irresponsible. Many would agree, perhaps, that if a document is deemed necessary it would be more reasonable to prepare a statement of general principles that would serve to guide rather than rule.

2. There is division on the question of the value of a committee to review experimental protocols. Some favor it and others see this as either useless or harmful. The latter argue that a committee cannot take responsibility, that this must always be in the hands of the individual investigators and should be shared by his department chairman who is, in fact, ultimately responsible for all that goes on within his department. The departmental chairman will seek consultation and advice when he feels this is necessary. In this fashion the valuable consultative features of the committee are available, but there is emphasis on the fact that the legal and moral responsibilities return to their rightful place in the minds and hearts of the investigators.

The other view emphasizes the more certain assurances of safety and the improvements in design that may accrue from a careful and responsible review by a committee of peers.

3. The element of consent on the part of the subject is absolutely essential and paramount. The quality of consent can be properly judged only by the investigator when the subject is legally competent. When this is not the case, he must be guided by legal interpretations in addition to his own high standards of responsible behavior.

4. Some recommend the Golden Rule at least as a minimal requirement. They recognize the special interests and motivations of the investigator and hence do not imply that because the investigator is willing to be a subject it is permissible to impose this on others; but, rather, that he has no right to subject others to an experiment which he himself would not be willing to serve. The ultimate proof of this willingness to serve is, of course, serving.

A problem which was neither raised nor discussed in this questionnaire has to do with whether or not the person who functions as the investigator of a patient should at the same time serve as that patient's physician. The primary role of the physician is to employ every means at his disposal to return the patient to a state of health. The goal of the investigator is to answer some question within an experimental design which may indeed have features (albeit consented to by the patient) that tend to delay his recovery. These two roles have inherent conflicts which some feel impose an impossible circumstance for one person. It is admittedly a difficult position but it is possible that self-restraint on the part of the physician-investigator might be as great or an even greater protection for the patient as the restraint that might be imposed by the patient's physician as an individual vis a vis the investigator as a separate entity. The latter, for example, might have some vague lingering doubts about the wisdom of a particular procedure and have these doubts dissipated simply because the patient's physician acquiesced. The investigator in this instance may allow himself more freedom than is desirable. It would seem unnecessary to have to choose between these two for all times. It is probable that either will work provided the physician and investigator are well informed and responsible, and without these qualities neither system will protect the patient.

It is clear that these problems cannot be resolved in this discussion. However, if a tentative position is permissible, the following might be recommended:

1. Specific codification be deferred at least until a careful study of the problem can be implemented.[4] However, it would probably be helpful if each institution were to adopt a statement of principles to guide the clinical investigator.

2. A committee to review experimental designs may be helpful. However, their creation must not allow the development of a climate wherein the actions of a committee may be permitted to substitute for the ultimate responsibility that must be borne by the individual investigator.

Documents and codes cannot substitute for the integrity of the individual investigator. Ultimately the answer to these problems lies in the possession by those in responsible positions of the qualities of integrity, understanding, a respect for the dignity of one's fellow man, accompanied by an intelligent curiosity and the ability to design safe and critical experiments.

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4. A study is currently underway under the direction of I. Ladimer at the Law-Medicine Research Institute of Boston University entitled "Administrative Practices in Clinical Research."

EPIDEMIOLOGY AND MODERN MEDICINE

JOHN R. PAUL, M.D., *New Haven*

THE term Epidemiology is now more familiar to physicians and to medical students than it used to be. Today almost everybody knows how to pronounce this word, but I can recall that on several occasions, in giving a talk on this subject the chairmen, who introduced me, stumbled over the title. Perhaps the reason that the concept of epidemiology has become more familiar is, that its significance has become more apparent, as its meaning has changed. If you looked in the dictionary one or two decades ago, you found that this term was defined as the "study of epidemics." Such is not the case today. A more modern concept of this "science" covers much more than *epidemics* and has broadened to include all kinds of disease,—not infectious disease alone. Thus there is now an epidemiology of heart disease, cancer, drug addiction, industrial poisonings, mental illness and suicides. There is little need of my emphasis on that point before this audience because the doctrine has been preached here in this school for a long time.

The definition of epidemiology which I shall use is my own,—and although considered by many to be inadequate, at least it has the advantage of simplicity. My concept of the modern epidemiologist is a person who has something of the clinical investigator in him, who seeks to detect, to measure and to evaluate the *circumstances* under which disease occurs. Most of these circumstances are unknown, and many of those which are known are not easily measured, but there are a few of various kinds which are recognizable and measurable. Many of these circumstances reflect the various ways of life which people follow,—but they may be conditioned by microbiological, toxicological, or climatic circumstances, the term climatic being used not only in the meteorologic sense but in a sociologic sense. As to the kind of measurements which the epidemiologist may wish to use, these range all the way from counting heads, to clinical diagnostic tests.

As the scope of the term has broadened its significance has grown and I suspect that departments of Epidemiology will take their place shortly in the crowded curriculum of medical schools with the realization that knowledge of this subject can bring a new dimension to bear on considerations of disease and its causes. This prediction is made because textbook descriptions of important diseases are considered incomplete today, if they lack a section on the epidemiology along with the other usual aspects which the clinician should know, such as its lesions, its clinical course, or its *blood* picture.

The possession of two or three attributes might seem to be useful for those who wish to enter the field of modern epidemiology. First it would be desirable if the young epidemiologist had something of the naturalist, or perhaps the biologist, in him. Second he should have a proper respect for biostatistics and preferably some training therein; and thirdly, clinical experience and an interest in the pathogenesis of disease is desirable. The proposed combination of clinician and biostatistician may sound incompatible to some but it has been known to exist successfully in the same person now and again.

As to the epidemiologist's major functions, it is not enough for him to measure how many people become ill in a given year with a given disease or how many die; the epidemiologist wants to know what the disease picture is under different circumstances and in various populations and places; what the subclinical aspects of a disease are, so that he may get a better idea as to its real prevalence. If, for instance, he is studying tuberculosis, he wants to know what the rates of positive tuberculin tests in children and adults are within different social groups. If he is to study poliomyelitis, he wants to know the antibody picture in the healthy normal population. This latter is what is known as *Serological Epidemiology*.[1] He must be equipped to collect on certain occasions his own material and carry out his own tests whether they are antibody determinations, virus isolations, or the determination of blood lipids or transaminase levels. These are the *new tools* which supply the cutting edge for modern epidemiology. Such measurements were introduced into the epidemiological field with a rush as it were, early in World War II when, with the creation of the Army Epidemiological Board,[2] scores of clinical investigators were asked to apply their skills to the epidemiologic problems of the Armed Forces. This Board gathered such momentum that it still exists. It did much to create enthusiastic groups of clinical epidemiologists here in

From the Section of Epidemiology and Preventive Medicine, Yale University School of Medicine, New Haven, Connecticut.

A lecture given on April 18, 1960, in the Centennial Series of Lectures of the State University of New York, Down State Medical Center, Brooklyn, New York.

this country, and to shape the course of what is really a new science.

But let us come quickly to consider some *examples* of what I am talking about. First, from the standpoint of *diagnosis,—diagnosis* not only of a patient or patients but of a situation. It is an old rule that if you do not know what is wrong with your patient, it is often useful to look carefully at his family. This means more than the usual casual family history, which is often the weakest part of the hospital record and generally lacking in important details. The way the epidemiologist or rather the clinical epidemiologist, looks at a patient or his family is like a detective visiting the scene of the crime. He looks at the victim but he also looks at the situation. Sometimes it is wise for him to venture a little beyond the patient's domicile into his workshop or into the surrounding community.

An early example of this sort of detective work can be found in the story of Zenker and trichinosis, which was a landmark in the epidemiology of that disease. I have often used it in teaching students to illustrate the manner in which a telling lesson was learned from an epidemiologic study involving only a small group of people. These events took place just 100 years ago. The lesion of trichinosis in the muscles of man had been known since 1822, and in the hog since 1847—but Zenker put the two together by the study of a single outbreak, starting with one patient. Part of the story, as related by Dr. George Blumer,[3] can be found in a case report of a 20 year old maid servant employed at an inn in Germany. She entered the hospital on the 12th of January, 1860, having been ill since Christmas and having taken to her bed at the New Year with a fever that was thought for a while to be typhoid fever. She died two weeks later.

Zenker demonstrated the parasites of trichinae in the muscles in great numbers at the autopsy. But his observations went farther than the hospital autopsy table for he took the trouble to go out to the inn where the patient had been employed and found that a hog had been slaughtered there on the 21st of December and the carcass was still on hand. He took samples of the meat from this hog, and here he also found numerous encapsulated trichinae. He then learned that the wife of the landlord was sick at the same time as the maid, that her husband was sick later, and the butcher who had slaughtered the hog was also sick—all with similar symptoms. He drew the conclusion that the infection of the sick persons was caused by the consumption of or contact with the trichinous pork.

This is an example of *clinical epidemiology* in which an alert pathologist worked out the epidemiology of an important disease by starting with one case. The discovery stemmed from an interest in the circumstances under which a patient became ill, instead of regarding her as a lone sick individual who had suddenly popped out of a healthy setting. Thus Zenker brought his pathological skill and his judgment to bear on the situation as well as on the patient. He did not consider his task as done when he had made a successful diagnosis on a single case by his histological methods. As a pathologist, with his "workshop" in the hospital, he probably had just as many reasons to remain immersed among his fixing fluids and stains as modern pathologists have; yet he did not dispatch his laboratory assistant to the home. Apparently he was ready and willing to put on his boots to venture out himself on a winter day to the place where the trouble actually arose.

It would be good if the full-time pathologist or clinical investigator of today having developed more methods of precision than were available to Zenker did more of this kind of epidemiology and indeed the brief story is mentioned because modern medicine does tend to concentrate so many of its efforts on observations and measurements made upon sick people in an examining room or in bed, where, for understandable reasons patients are "isolated" from their usual surroundings, from their family, even stripped of their clothes. Unwittingly the physician also isolates himself from the patients' surroundings by this procedure. This comment should not detract from the obvious fact that hospitalization brings enormous and obvious advantages to the *care* and *study* of the sick. Nevertheless, the point here is that the pendulum has, I believe, begun to swing back into extra-hospital spheres and will continue to do so, if the science of preventive medicine is to be developed, which, in turn, derives its strength from its basic science—*epidemiology.*

Other examples which we might quote at length was the discovery of a relationship between carcinoma of the lung and excessive cigarette smoking. This was an epidemiologic discovery. Still a third might be the Australian work in which a relationship between German measles in a pregnant mother has been found to be associated with an unusual prevalence of congenital defects in the infant. One wonders how many other relationships are lying close to the surface of recognition for an alert epidemiologist to discover.

As a manifestation of the upsurge of interest in this approach, we see Dr. Paul Dudley White[4] and many others becoming deeply concerned with the epidemiology of heart disease, notably coronary occlusion and its prevalence among different people and in different places. We see the National Cancer Institute launching a series of studies on the epidemiology of cancer and we see similar efforts being made to determine predisposing factors in diabetes, peptic ulcer, multiple sclerosis and rheumatoid arthritis. Little is known about the epidemiology of these diseases and yet how anxious most of us are to find out more about them. Why is *multiple sclerosis* so much more common in northern countries than southern? To what extent is rheumatoid arthritis a disease of heredity or environment? Is it a chronic infection? Here is a challenge. Pathologists, microbiologists, biochemists, physiologists and clinicians have struggled with these problems for years, epidemiologists should now see what they can do with this challenge.

Before we labor this point too hard, let us turn for a moment to the history of epidemiology. Historically speaking, man's efforts to find out about disease, plague and pestilence, are probably as old as his efforts to create a religion for himself. Certainly Hippocrates was concerned with this science. It received much attention in the 17 century from Thomas Sydenham of London, and, in our own country, 100 years later, from Noah Webster, Yale graduate and New England lexicographer. He was not a physician and many of his conclusions were based on folklore and yet some of his epidemiological deductions are as acceptable today as the pompous explanations about the causes of disease, which the contemporary doctors of medicine put forth during and shortly after the age in which he lived,—such as yellow fever being caused by rotting coffee and puerperal sepsis being a pure act of God. Anybody was allowed to have an opinion as to the origin of pestilence in those days. We can recall that this was a period in which an appreciation of the microbial causes of disease was at a minimum and environmental influences dominated the field. Physicians knew about the contagiousness of measles and smallpox; and they knew how to vaccinate individuals against smallpox but it was not until the late 19th century and *after* the age of Pasteur had dawned, that bacteria and indeed a virus or two, had been recognized and their pathogenic capacities appreciated. With the discovery of the microbial origins of disease there was a wave of enthusiasm about *the* cause of a given disease:—a microbe which could actually be seen, identified, isolated, and put into a test tube and carefully stoppered there with a cotton plug. The impact which this concept had upon the medical profession was so great that the host and the environment were for a while eclipsed until the original concept of Pasteur began to wear thin and extra-microbial factors again began to gain recognition. These extra-microbial factors representing a more realistic concept of the *seed,* the *soil,* and the *climate.* The seed of course was the microbe but it takes more than a bacterium to produce a disease, it takes first a susceptible host to be infected, and it takes still another influence, the climate, to bring these two factors together and allow infections to flourish or wither. In infectious disease it is the microbiologist who has the assignment of taking care of the seed—but the epidemiologist is called in when matters of soil and climate are involved. This is where the opportunity comes for providing a new dimension to the study of disease and from this approach public health administrators and physicians have much to learn. They also have much to contribute.

Another of the epidemiologist's many functions is that of following the *changing picture of disease.* This is what might be called *philosophical epidemiology* and this kind of endeavor can again be anybody's privilege. In the United States, diseases of the 20th century have shifted during the last half century. The experience of the last 50 years in the State of Connecticut has indicated that infectious diseases largely responsible for killing people in 1900 have now been replaced by quite another set,—the chronic degenerative diseases. The change has by no means come about entirely through the efforts of the medical and the public health professions with their sanitation and antibiotics, although they have had a major hand in it. Other factors have taken part, too:—refrigeration of food, central heating, good nutrition, these all have epidemiologic significance, and have exerted an impact not only on the illnesses we acquire but on the members of the population available to acquire them as well. As some of the hazards of early life and the threats to premature death from infectious disease are curtailed, there is an increasing percentage of the population arriving at age 65,—a situation which creates more opportunities for them to acquire *diseases of old age.* One can hardly look at this shifting scene without wondering what it will add up to tomorrow. This is a consideration, with which thoughtful epidemiologists and clinicians, too, are faced:—What does this reaction to a changing environment and new ways of life mean? Should one hazard an opinion about it any more than to regard the leading diseases of 1960 as part of "our times?"

In an effort to give such opinions, it may be worthwhile to examine the record more closely. This may reveal a number of important facts. For instance, in reviewing the death rates among adults, it appears that, whereas female mortality has pursued a declining course, the decline in male mortality has been much less. As a reflection of this it has been claimed that the average married woman in this country today may expect to look forward to 10 years of widowhood. There are certain common diseases which attack men in middle age, which in this country are *not* declining. They include:—duodenal ulcer, carcinoma of the lung and coronary occlusion. Here again the epidemiologist should enquire whether, if this increase be closely tied to modern ways of living, these diseases are to be regarded almost as actual products of our age? Perhaps our modern age even deserves the blame of having *created* these diseases? You all know the story, by no means proven, of attempts to incriminate rich diets or the lack of continued physical activity, especially for business executives, as contributing factors leading to vascular disease. Dr. Morris' study on the incidence of angina pectoris and coronary disease in London bus drivers—who sit, as opposed to bus conductors who scramble up and down an iron staircase, is a provocative example of clinical epidemiologic research and thinking here. Cigarette smoking as a factor in the genesis of carcinoma of the lung is another illustration. These then may be examples of diseases of our own making and it is for the modern epidemiologist to consider whether we are any closer to knowing,—"what is good for mankind?"—than were those who lived in London in the 17th century where cholera and plague flourished. The Londoners accepted the fact that the water supply was not of the best and that rats and lice were abundant but apparently they did not regard this situation as being in need of radical improvement. Our own 20th century situation may seem to be a vast improvement over theirs but the failings come at the opposite end of the scale with too much indulgence of creature comforts. Obesity has become a *national* disease in the United States and we are becoming ever more dependent on labor saving devices. On these habits and ways of the 20th century life many of the diseases of the second half of this century shape their pattern, and so entrenched are these habits that it would sound out of order for me to rail against them. On the other hand the medical profession has been over cautious in expressing opinions on these matters. Perhaps the rank and file of physicians are waiting for future epidemiologists who, having examined the record, can predict more accurately than is the case today just what the long range effect of alcohol, smoke of all kinds, radiation and excess food may have upon civilization.

However, as already mentioned, the present scene is not *all* our fault. The pattern depends on the effect which one disease has upon another. It sounds complicated, but biostatisticians tell us that no disease can be eliminated or reduced in rate without its having an effect on the rates of *all the other diseases* to which man is heir. Thus, as the acute infectious diseases, which often attack *young* people, are brought under control, debilitating and degenerative diseases begin to take over though they usually appear later in life. Another effect is that of postponing, through the introduction of sanitary measures the age at which a patient acquires a given disease. An illustration of this trend can be found in a familiar disease,—poliomyelitis. It is now recognized that during the past half century the epidemiologic behavior of poliomyelitis has been undergoing an evolution. Before this time and under primitive sanitary conditions poliomyelitis apparently did not amount to much. For example, prior to 1900, this disease was uncommon and regarded pretty much as a curiosity. It had a different name,—"infantile paralysis," for it was a disease then largely restricted to infancy. How different that is from our recent experience when "polio" ceased to be a curiosity and came to be regarded as a dreaded scourge which before the days of the Salk-type vaccine, was on the increase in this country and ever more prone to attack older children and even adults. This ominous trend occurred in countries with high standards of living, notably Scandinavia, Western Europe, North America, and Australia. In contrast, an evolution of this kind has not been universal, for in many parts of the world, notably in North and South Africa, Egypt and the Middle East, and in certain countries in Latin America, the transition from sporadic "infantile paralysis" to epidemic poliomyelitis has hardly begun. These latter countries could be called primitive as regards sanitary arrangements by our standards. In other words, endemic poliomyelitis, a disease restricted to infants, still persists in areas with substandard sanitation. Severe, epidemic poliomyelitis came early to the most advanced countries and remained there until the problem was met,—in part at least, by vaccination. That story is not finished.

In seeking an explanation for this apparent paradoxical epidemic behaviour of poliomyelitis, the opinion has been expressed, that "modern polio" is associated with those public health measures or those circumstances which raise the level of environmental sanitation within a given area and effectively protect infants from those infections which used to be responsible for high infant mortality. In an attempt to find out more about this, Payne of the World Health Organization has recently drawn attention to an inverse relationship between *infant mortality rates*, collected from a wide variety of nations throughout the world, and the *recorded incidence* of poliomyelitis.[8] Infant mortality rates are generally considered as an index of certain types of environmental sanitation. In other words, as sanitation improves, infantile mortality rates nearly always go down; and, somewhat surprisingly poliomyelitis rates nearly always go up during the same period in years. It does not imply that the decrease in infant mortality rate is *directly* responsible for an increase of poliomyelitis but one can easily imagine reasons why these rates can both be affected inversely by the same process, for the suppression of opportunities for the infant to acquire enteric infantile disease of a variety of kinds can at the same time suppress opportunities for the acquisition of poliovirus infections. Thus, if the infant is so protected during the early years of life that he fails to acquire these inapparent and immunizing infections from local strains of poliovirus, he may subsequently reach school age having failed to have gained any immunity to this infection. At this stage in his life or later, a poliovirus infection is apt to be more severe, and by college or military age still more severe. As such,—*postponement* of poliovirus infections by sanitary methods (along with the failure to vaccinate) tends to bring poliomyelitis out into the open, as it were, with reported attack rates which are inevitably higher than those recorded in the days of "infantile paralysis." It is small wonder when one looks back to the days just before the Salk-type vaccine as to a somewhat sinister situation and one can perhaps see what proponents of the live oral poliovirus vaccine have been thinking about in this connection.

One could also list a number of other examples of disease which are characteristic products of our present way of life—but there is no need to blame anyone in general for this. Penicillin resistant, staphylococci have become a menace because they have found their way into an apparent vacuum created by the antibiotic age. The sizeable number of cases of serum hepatitis which have resulted from the increasing use of transfusions and parenteral medications is another case in point. These are by-products of the therapeutic age in which we live. I would hesitate to mention further examples because each one raises such a long list of new questions. However, there is one conclusion deserving mention namely that the present pattern of disease depends upon our ways of life. There have been too few medical scholars in our time concerned with the spectacle of the evolution of human disease and its possible meaning—one was Charles Nicolle of the Pasteur Institute of Tunis, North Africa,[5] who discovered that the louse transmitted typhus. Another is Sir Macfarlane Burnet, Melbourne, Australia,[6] and still another from the city of New York is Dr. Rene Dubos of the Rockefeller Institute.[7]

The theme with which these men have dealt has been to regard a disease as a biological phenomenon rather than an evil to be stamped out like sin. Next they recognized that we as people are not entirely passive elements in this picture but insofar as we control our environment, we either suppress or we make some of our own diseases.

I shall close with the reminder that the diseases of the second half of the 20th century will be different from those of the present generation, and with the hope, not just a pious hope, that physicians may follow this trend more closely. It can be done if a fresh generation of clinically minded epidemiologists or epidemiologically minded clinicians come into being and are willing to bring this new dimension into their study of disease. This new point of view constantly poses the question: Why do we have this or that disease? And at what price?

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MORPHOLOGICAL ASPECTS OF ATHEROSCLEROSIS IN THE CHICK

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One of the powerful tools in the study of atherosclerosis has been and will continue to be the experimental animal. To be useful, it is essential that the gross and histological appearance of the lesions in animals should resemble closely those seen in man, particularly since, unlike in many of the infectious diseases, the specific agent causing the disease in man is not yet established. This view was clearly appreciated by the late Dr. Winternitz—to honor whose memory this article was written—for after all, he built his theory of the genesis of atherosclerosis on morphological grounds.[1,2] It is our intent to summarize the evidence supporting the view that experimental atherosclerosis in the chicken resembles the natural disease in man, considering their difference in species.

True atherosclerosis—the lipid containing intimal lesion similar to that seen in man—was produced in an experimental animal for the first time by Antischkow and Saltykow between 1908 and 1912.[3] This was accomplished by feeding rabbits a diet containing meat, milk and eggs over a period of months. It was soon established that the component of this diet responsible for the production of the intimal lesion, was cholesterol.

Because, until recently, it was difficult to induce this lesion in any other species, because the rabbit is a herbivore and so the carnivorous diet used was considered foreign to it, and because atherosclerosis did not occur spontaneously in this species, it was considered by many that the work on the rabbit was not germaine to the human disease—a view which, incidentally, is no longer tenable.

In early 1940, when this department started a research program in atherosclerosis, this view was still widely held. It was for this reason that a search was made for a species of animals in which atherosclerosis occurs spontaneously and which responds to cholesterol feeding with the production of intimal atherosclerosis.

After careful search of the literature, the chick was selected. This avian species spontaneously develops a gross intimal lesion in the coronary arteries and in the abdominal aorta similar to human *arteriosclerosis.*[4] In the latter site, occasional small amounts of sudanophilic material are deposited, resulting in a histological appearance very similar to human *atherosclerosis.* The chick also responds—as was soon established in the initial experiments—to cholesterol feeding with atheroma formation and true atherosclerosis if the cholesterol-feeding is continued for a sufficiently long time. In addition, the egg-laying hen on a normal, cholesterol-free diet, develops lipid infiltration and microscopic atheroma of the ascending and descending thoracic aorta, resembling "fatty streaks" of human aortas. This lesion can also be experimentally reproduced in both pullets and cockerels by estrogen-administration. Thus, three types of lesions are available for experimental study in the chick: 1) spontaneous arteriosclerosis (and atherosclerosis), 2) diet induced atherosclerosis and 3) estrogen-induced atherosclerosis.

MORPHOLOGICAL CRITERIA OF THE LESIONS

The basic morphological criteria of spontaneous, cholesterol-induced and estrogen-induced lesions in the chicks have been adequately described in several publications from this department.[5-8] They will therefore be only briefly reviewed here and supplemented to include our most recent and newer findings.

a) *Spontaneous Lesions:* These lesions are usually located in the lower part of the abdominal aorta at the level of the renal arteries as a firm, longitudinal ridge, sometimes continuing into one or both iliac arteries. The lesion is usually pearly gray or slight yellow and of a semi-translucent character. It can appear in animals as early as 12 weeks of age and the incidence and severity increases as the animals become older. Histologically, this lesion is located in the intima. The surface of the plaque consists of loose cellular fibrous connective tissue, while the deeper portions are composed of a dense acellular fibrous tissue with collagen and hyalinization. The media is sometimes compressed and thin under the plaque. Rarely a slight lipid staining deposit of a homogenous type is found in the media—near portions of the lesions. Ordinary histological techniques fail to demonstrate any vascularization of these firm, fibrous plaques.

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The spontaneous lesions of the coronary arteries consist of small intimal plaques of loose fibrous connective tissue without sudanophilic material. The media is not involved. These plaques first appear when animals are at least five months old, and their incidence increases with age. From this description, it can be seen that the spontaneous lesion in the aorta and coronary arteries of chicks is almost certainly a primarily fibrotic process, i.e. it is an arteriosclerotic (not an atherosclerotic) lesion. Cholesterol feeding or estrogen administration aggravate and intensify the spontaneous lesion, leading to significant deposition of cholesterol and lipid and eventually to the development of the whole gamut of atherosclerotic changes seen in man. Therefore, the spontaneous lesion seems to be a site of predilection for subsequent atherosclerosis.

b) *Estrogen-Induced Aorta Lesions:* The spontaneous thoracic aorta lesion in the hen and the estrogen-induced lesion in either cockerels or pullets are morphologically identical. They are bright yellow, flat, non-elevated areas or slightly elevated pin-point-like lesions. Both stain with sudan. The former are lipid infiltration of a normal non-elevated intima and the part of the media adjacent to it. This is not atheroma by definition and is more properly classified as lipid infiltration. The elevated pin-point-like lesions are pure atheroma, i.e. small elevated plaques consisting of loose connective tissue with a conglomeration of foam cells. These are identical to the earliest lesions resulting from cholesterol-feeding and are almost certainly the first stage of atherosclerosis.

In the abdominal aorta of hens or estrogen-treated birds there is lipid deposition in the spontaneous fibrotic lesion near the lumen and near the media with occasional cholesterol clefts in the latter area.

No atheromata are found in the coronary arteries of egg-laying hens and of cockerels and pullets given estrogens. The only change seen in the coronary arteries, revealed in frozen sections, is an occasional area of a homogenous sudanophilic material in the media. No other histological or histochemical abnormalities can be detected in these areas in paraffin sections.

c) *Cholesterol-induced Atherosclerotic Lesions:* The primary lesion in the aorta and the coronary arteries is the foam cell intimal cushion as described above. These lesions can be produced in chicks as young as eight weeks of age and after only three to five weeks on an atherogenic diet. If cholesterol feeding is continued for a prolonged period of time (eight weeks or more) the spectrum of atherosclerotic changes seen in human lesions, including foam cell plaques, necrosis and atheromatous abscesses, fibrosis and hyalinization, calcification and cartilaginous-osseous metaplasia can be produced. In large, significantly elevated lesions, numerous new capillaries within the plaques, and occasional hemorrhages into the plaques can be observed. The capillaries seem to arise from the lumen of the vessel.

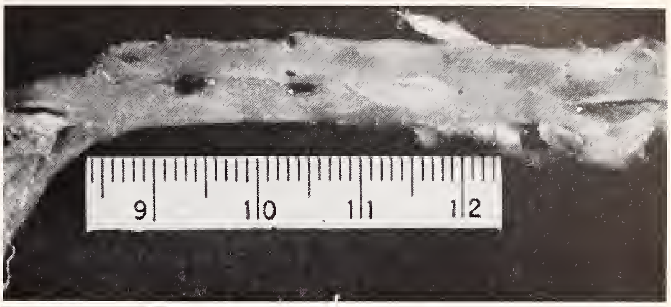

Figure 1. Gross appearance of two ulcerated abdominal atherosclerotic plaques. The dark areas in one of the ulcers are hemorrhages.

When cholesterol feeding is combined with estrogen administration the morphology of aorta atherosclerosis remains unchanged. However, under these experimental conditions coronary atherosclerosis is significantly suppressed.[9] Furthermore, estrogens given to chickens in which atherosclerosis was previously induced by a standard high-cholesterol, high-fat, high-protein regimen can reverse the coronary lesions without influencing the aortic lesions.[10] From these experiments it must be concluded that there are differences in atherogenic response in different vascular beds, and that experimentalists have to study each vascular bed separately under various conditions to determine its biological behavior. It would appear to be a fundamental morphologic error to assume that results occurring in one vascular bed are necessarily representative of that to be found in another.

d) *Ulceration of Atherosclerotic Lesions:* Until very recently ulceration, a common feature of human atherosclerosis, could not be produced consistently in animals. Lately, we have succeeded in producing ulcerated aorta and coronary lesions in chicks. This was achieved by producing atherosclerotic plaques on a high-cholesterol, high-fat, *low*-protein diet and subsequently treating these birds with large doses of estrogen. The time course of appearance and disappearance of these ulcerated abdominal aortic and coronary lesions suggest that ulceration under these experimental conditions occur during the healing of lesions.[11, 12]

The morphology of the ulcerated lesions shows the following characteristics: They are longitudinally arranged and located anywhere in the muscular (abdominal) aorta, most frequently in the inter-renal region. This corresponds to the site of the spontaneous lesions. The color of the plaque is

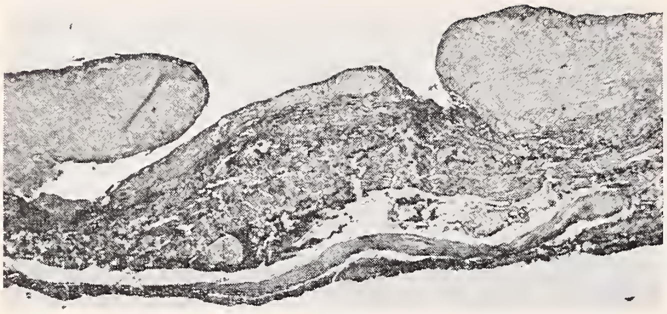

FIGURE 2. Microscopic appearance of an ulcerated abdominal lesion. Note the overhanging edges of the media and atherosclerotic intima and the dense fibrous connective tissue layer in the adventitia at the base of the ulceration. Hematoxylin-eosin stain, X 65.

yellow, the edges are elevated and undermined and the base of the plaque, varying in size from a narrow slit to almost three-quarters of the width of the vessel, is opaque with a denuded smooth look (Fig. 1). Occasionally newly formed yellow atheromatous deposits are seen. Hemorrhages are frequent at the proximal and distal edges of the ulcer, and in rare instances gross dissection of the vessel was observed.

Microscopically, the ulceration involves the inner portion of the media as well as the intima. The base of the ulcerated area is bare of endothelium and occasionally the media is almost completely destroyed and the adventitia shows dense fibrous connective tissue. The edges of the lesion are overhanging, atheromatous, with the elastic fibers split and scarce. Hemorrhages are almost always present with or without microscopic dissection (Fig. 2). At a later stage, probably during a process of restitution, the edges become rounded—reminiscent of the picture of an amputation stump (Fig. 3). Still later, calcium sometimes is deposited at the base of the ulceration with only slightly elevated areas left at each end (Fig. 4). This microscopic picture of the sequence of events confirms the impression that ulceration probably occurred during healing of the lesion.

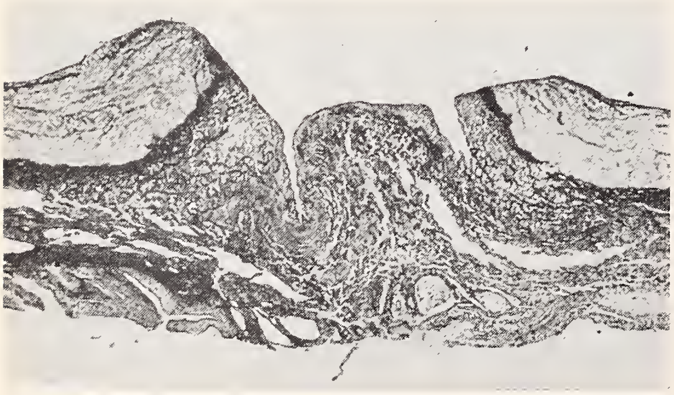

FIGURE 3. Microscopic appearance of a healing atherosclerotic ulcer of the abdominal aorta. The edges of the ulcer are rounded, the base is covered with endothelium, the media in the base is beginning to regenerate. Note the splitting of th elastic fibers at the edges of the lesion. Combined orcein-Van Gieson stain, X 60.

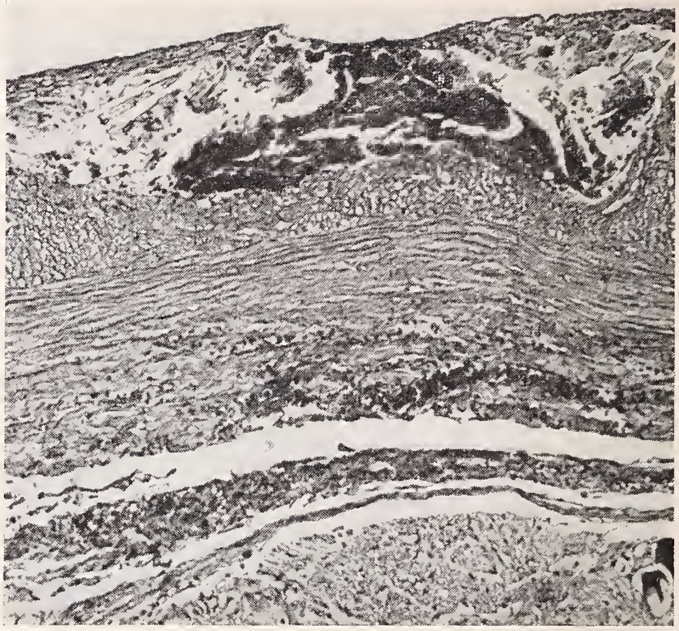

FIGURE 4. Microscopic appearance of a healed atherosclerotic ulcer of the abdominal aorta. The site of ulceration is covered with endothelium and contains a large calcified area (black in the microphotograph). The media has regenerated. There is still significant fibrosis of the adventitia. Hemotoxylin-eosin stain, X 150.

Coronary lesions have also been observed to ulcerate. However, due to the inability to observe them grossly, and therefore, to choose proper sites for histological examination, such a sequence of events has not been established so far.

Thrombosis on these ulcerations has not been consistently produced in animals.

CONCLUSIONS

Experimentally produced atherosclerosis in chicks closely resembles the disease in man morphologically. Taking into consideration the anatomic differences in architecture of the great vessels and coronary arteries among the various species, the similarities between experimental and human lesions are indeed remarkable.

Not all stages of the human disease are reproduced in short-term experiments, and the location of the lesions (thoracic vs. abdominal; small intramural coronary artery branches vs. large main trunks) are not identical to those seen in man. However, if the experimental period is sufficiently long in duration, then all stages can be seen and the location of the lesions also begin to approach the usual sites seen in man. Furthermore, in these protracted experiments lesions can be produced without great elevation of blood cholesterol. It is for these reasons that it is thought that the experimental disease and the influences acting upon it will give insight into the mechanisms applicable to man. Experimental atherosclerosis therefore can be used to determine pathogenesis and etiology of the disease. Animal studies are also valuable in screening various methods of management, and specific therapies for treatment and prophylaxis.[13] Once suggested by animal trial to affect the morphological development of atherogenesis, such therapeutic and prophylactic approaches must be confirmed by clinical trial in man, the species we are most interested in. After all, there are species differences between man and the chicken and the many other species in which atherosclerosis has now been produced experimentally. In fact, the species differences may themselves, like individual and strain differences, serve to explain the multifaceted aspects of atherosclerosis.

It has been clearly established now that dietary cholesterol is a vital factor in atherosclerosis, but not the only one. Other dietary constituents, lipid, carbohydrate, protein, vitamin and mineral, can alter the induction, regression and character of the atherosclerotic lesion in animals—and presumably in man. Furthermore, hormonal factors play a significant role in modifying these attributes of atherosclerosis and therefore its morphology. Whether nervous system factors are also involved is not yet established. Future advances in our knowledge of this disease must still be based on the morphology of experimental atherosclerosis now that its resemblance to the morphology of the human disease is clearly established.

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* Deceased.

THE WINTERNITZ "VASCULARIZATION THEORY" OF ARTERIOSCLEROSIS

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It is probable that a special interest in the vasa vasorum lurked in the back of Dr. Winternitz' mind for many years. This was perhaps presaged by an early paper on syphilitic aortitis.[25] During his tenure as dean of the Yale School of Medicine, three publications concerned with the vasa vasorum appeared from the Department of Pathology, then under the chairmanship of Dr. Raymond G. Hussey. One of these[30] had to do directly with the demonstration of these small vessels by means of injection and clearing methods, another was concerned with the part played by the vasa vasorum in the pathogenesis of dissecting aneurysm,[20] and the third represented a thorough review of existing literature on the nutrition of the blood vessel wall.[18]

It is impossible at this date to assay the influence which Dr. Winternitz may have exerted in stimulating the production of the work just mentioned. Certain it is, however, that upon his retirement from the deanship in 1935 he attacked the problem of the vasa vasorum and their relation to disease with a vigor characteristic of the man but still astonishing in its intensity. He spent literally hundreds of hours at the dissecting microscope teasing apart bits of aorta or coronary arteries, and many more studying innumerable stained sections of blood vessels. The example thus set of plain hard work was so prodigious that his associates were saved from feeling like laggards only by the tremendous enthusiasm which transmitted itself not only to those working with him but to all who came within earshot.[9]

By a combination of injections and methods for clearing the vessels in glycerin or methyl salicylate, the mode of origin and the distribution of the vasa vasorum were studied, as well as the greatly increased vascularity associated with atheromatous plaques and the pathway thus provided for exudation of various substances from the blood as well as the possibility of hemorrhages and the contributions of such hemorrhages to the various constituents of the plaque. The observations gave support to Dr. Winternitz' concept of the arterial wall as an organ able to respond to injury like other tissues.

Publication of these findings came soon after Paterson's paper on the importance of hemorrhage from intimal capillaries[14] and nearly coincided with Wartman's description of occlusion of coronary arteries by such hemorrhage.[21] Perhaps in part because of this, and in spite of pointed criticism by such competent adversaries as Leary,[7] considerable enthusiasm for Dr. Winternitz' ideas was shown for a time. Undoubtedly, the sparkling eloquence with which he presented his thoughts had much to do with their reception.

During the 1940's the literature was relatively silent on the subject of vascularity of the arterial wall. Recently, however, there has been a reactivation of interest, and attempts have been made to place Dr. Winternitz' theories in perspective, as it were, and to fit them in with other concepts of the pathogenesis of arteriosclerosis.

The vascular supply of the *normal* artery has been reviewed and restudied by Woerner,[29] who concludes that the intima and inner third of the media are to be regarded as avascular, obtaining their nutrition by diffusion from the lumen. Schlichter[19] studied the vascularity of the aorta in various species of animals and concluded that those having the *least* vascularity in the inner coats seemed to be more susceptible to atheroma. A similar conclusion regarding man was reached by Geiringer[4] and by McLetchie[10] who, however, both recognized the importance of the intimal capillaries which appear quite uniformly when the diseased intima exceeds a certain critical thickness. They inclined toward the view that the intimal capillaries were derived from the organization of mural thrombi, thus establishing a link with the concepts of Duguid.[2,3]

The monograph of Morgan[12] has given considerable support to the original views of Dr. Winternitz. This author has reiterated the importance of repeated exudation and hemorrhage from intimal vessels in contributing to the "mush" which constitutes many atheromatous plaques. He has pointed out, in contradiction to the view of Leary, that the insoluble nature of cholesterol may be reason enough for it to accumulate as the result of *repeated* episodes of hemorrhage into a plaque, even though the actual cholesterol content of the blood is relatively low (blood with a high lipid content would naturally contribute more[11] and this perhaps provides a link with the "cholesterol-lipid school" of atherosclerosis).

Support from another quarter has appeared in studies on the accumulation of cholesterol in a normally avascular tissue, namely the cornea of the eye.[1,22,23] Although these studies are interesting in many ways, it is particularly noteworthy that a full-blown picture of an atheroma-like, lipid-rich lesion in the cornea did not occur until the area was vascularized by small vessels growing in from the limbus.

The most consistent supporter of Dr. Winternitz' "vascularization theory" has been Paterson, whose pioneer work on intimal hemorrhage,[14,15] mentioned above, has been abundantly confirmed.[5,6,12,13,21,24,26,27] This author has, in fact, reopened the question of the vascularity of the normal (or nearly normal) intima by finding what appear to be endothelial cells, demonstrated by the alkaline phosphatase method, in vessels showing only slight thickening.[16] He has also shown that iron pigment can be demonstrated by a gross Prussian blue reaction in plaques that are only slightly elevated,[17] thus raising the question of whether intimal hemorrhages may not be more frequent than we think. Work now being carried on in Paterson's laboratory suggests that intimal hemorrhages are more frequent in the aortas of hypertensive patients than in those of normotensive persons.[11]

In summary, it is clear that there is a strong current revival of interest in the ideas which Dr. Winternitz put forth over 20 years ago. It is also becoming obvious that these ideas need not always be regarded as in conflict with or inconsistent with other views on the pathogenesis of atherosclerosis.[8] This is well brought out in a recent leading article in the British Medical Journal.[6] Finally, it is gratifying that increasing recognition of the importance of his work led to Dr. Winternitz being invited to speak on the blood supply of the vessel wall at a symposium[28] on arteriosclerosis in 1954, the report from this meeting being very nearly his last published article.[9]

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BASIC SCIENCE — STIRRING THE TROUBLED WATERS*

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SHORTLY after being asked to contribute an article in memory of my old and good friend, Milton Winternitz, I read, "Symposium on Basic Research," the report of a conference recently held at the Rockefeller Institute before an audience greatly varied in interests, training and attainments. The report has not gone unnoticed and undiscussed; indeed, in some circles it has raised a minor furor.

The symposium is the kind that would have raised strong reactions in Winternitz, who had very positive views on how basic research should be conducted. Furthermore, he had no hesitation about stating his views. His statements were sometimes intolerant, frequently exasperating, but usually provocative and often important. In short, it was fun to argue with him.

I cannot say exactly what Winternitz' feelings would have been toward this particular symposium. I find even my own are somewhat mixed. But I should like to air some of my views as freely as would Winternitz, motivated, I assure you, not by malice but—like Winternitz—by the desire to look at facts honestly.

It is hard to know whether a colloquium such as this does service or disservice to the furtherance of basic research. It can be assumed to record the mature thinking of some of the best minds in various aspects of research. For this reason alone, the book deserves the most careful reading and the most penetrating criticism. Does the book represent the constructive discussion, which most would agree is so urgently needed, of the problems involved in basic research?

It must be clear already that Winternitz and I might have grave doubts. Either the majority of participants did not get to the core of the problems or there is no sound body of knowledge with a core to be reached. Probably a bit of both.

The participants included university professors, directors of research and industrial institutes, and scientifically oriented business men. Most of them have stature in the field of administrative science; few are research workers in their own right. This clearly shows through. Most of them are, however, called "professor," a term still to be used with caution in this country unless you are awfully sure of your social standing.

The conference opened on a strange note: an address on "The Need for New Knowledge," by J. R. Oppenheimer. This is one of those essays one hopefully expects to understand sooner or later, but never does. It sounds convincing of something but heaven knows what. Many of the phrases seem deeply preoccupied with the search for a meaning. The trappings of erudition are there but little of the substance. It is not an auspicious beginning.

Waterman presents an adequate discourse on basic research as a whole in the United States; considering that this covers quite a waterfront, to put it mildly. As would be anticipated, much excess wordage is wasted on trying to define basic research which, according to Waterman, seems only to have arisen since Vannevar Bush's report, "Science the Endless Frontier." It should have long since been evident that it cannot be defined in terms of motivation, purpose or practicality. Basic research is never to be regarded merely as a means to practical ends, or at least hardly ever. It is interesting that spiritual as well as intellectual goals are included by Waterman. I wonder if this was a slip. Clearly, it is just so much talk to divide research into basic and otherwise, and for one agency of government to be responsible alone for policy concerning federal support of "basic research."

It is anything but clear what W. O. Baker had in mind when he wrote, "The Paradox of Choice," the choice between doing what the investigator's interests impel him to do and doing what society might want done. There follows a remarkable collection of erudite and semierudite jottings which left this reader in a pleasant and somewhat somnolent haze. The word "genius" is tossed about with fine abandon. Mathematical and physical scientists are credited with showing the importance of amino acid sequence in endowing proteins with their high biological specificity. He ends with the conclusion that man's curiosity and the satisfaction he gets from exercising it can be coupled with the needs and ambitions of the human race. Unfortunately the means of insuring such coupling are not easy to come by.

Elvehjem quickly changes the tone of the symposium from one of elegant platitude to homely clarity. It is pleasant to read the views of one who knows research because he has done it. He suggests

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* Not necessarily representing accurately the views either of this Journal—or the author.

that the revolutions we have already gone through are as great as any we will encounter in the course of peaceful evolution of our society. Further, with wisdom, he states, "Our problem at the present time is to get as many people as we can into their proper places, for we lose a great deal in terms of initiative if we do not."

Dubridge is greatly exercised about the threat of government control, not by the government agencies but by, "the panels and advisory committees (composed largely of professors!)." He has a point when you think of the nominating committees of learned societies who often are totally unable to distinguish learned societies from country clubs. Some of these committee men think intellectual segregation is a tenet of biology as well as society membership. They should take a hard look at their own "protective coloration," which is a biological term some take to mean ambition without cause, or even snobbery.

The old wheeze about such elaborate and detailed proposals and reports being required that the investigator is hog-tied is hardly worth reporting except that a not inconsiderable amount of wordage is given to it. Dubridge proposes a "good smart administrator," as the best possible medicine. Scientists, according to him, become "autocrats of the most difficult kind," when they have control over the activities of their colleagues. While one may not agree with some of these and other assertions, Dubridge presents his views with clarity and conviction and, further, his views are concerned with things that count.

While on the subject of science administration, it is time to consider the propriety of dividing the kinds of scientific life with some degree of equity between investigators and administrators. Obviously both are essential and the rub comes only when the scientist is given credit for having constructed a magnificent administrative function while the administrator basks in the phony glow of research accomplishment. There are combinations of both talents in one person and I have seen a number. Most of us need to share in some administrative function in order to develop a sense of realism, and, similarly, an administrator must have at least a nodding acquaintance with research. Wouldn't it be nice to have most people in the right spot so they could carve their careers instead of chiselling them?

A recurrent theme throughout is that "creative talent" should be supported "without restriction" and without any basis other than confidence in the inherent ability of the individual. This is high level talk, but transferred to the working level becomes largely meaningless. People at the "lower levels" know that few are creative geniuses and that the problem is how to select the average competent scientist who deserves support. They constitute the vast majority. Like a cantaloupe, nothing raises so much false hope as one good paper.

One wonders whether government scientists would agree with Astin that government basic research should be part of a larger structure devoted to some social good. "His activities are justified, and rightly so, to administrators and legislators in terms of his ultimate contribution to society and of some sure-to-come practical benefit."

Tuve's discussion shows a delightfully clear understanding of the core of the problem. Here is said much that needs saying despite the fact that it will not please many. For example, referring to the inflated ideas about the importance of big-money, scientific operations, " . . . most of our present hoop-la about space is certainly in this category." "Reasonable austerity" in research is recommended and to this I say Amen. Unfortunately, this is the only place in the symposium that these words are mentioned. Even Tuve fails to mention an alternative to the present system of selecting those for support, although freely critical of it. This business of "purchasing a creative investigator's working lifetime" is a fine phrase but how to spot this paragon is not made clear. Do we seriously propose, as is done by Tuve, the creation of an elite body of tax-supported investigators, responsible to nobody? So far, we have not done well with elite bodies of any kind in our democracy. We have a few in science but their very selectivity has kept them largely impotent.

Some years ago the principle of "career investigators" was elaborated and put into practice by the American Heart Association. Organizations of this sort are rather contemptuously dismissed as being interested only in directed and "categorical" research. Actually, they, like most agencies that support research, make a genuine effort to support basic research. One of the real difficulties seems to be that applications for basic research are scarce because basic research workers are scarce.

It is good to see an experienced administrator like Morison stand up for some of the good things government does. He finds that, "Procedures now under study in Washington make it likely that a satisfactorily large proportion of funds will be distributed for long periods of time and with few restrictive strings attached." Private foundations surely are not any bolder in the support of ventures than government and in many cases clearly much less so. It was not until about 1948 that large sums went as seed money throughout this country and this was concurrent with the establishment of the granting of research funds by Health, Education and Welfare. Comparative boldness is a hard thing to measure, but, offhand, it seems unlikely that the characteristic feature of private foundations is or has been in the immediate past a great measure of boldness.

The symposium is closed by an excellent summary by Wolfle. He recognizes that there is no one way to do research, there is no sharp division between basic and applied research, that it is only at the boundaries of definition that most definitions are unclear, and that society gets the kind of excellence it understands and appreciates. Possibly the symposium would have been better if it had started with Wolfle's statement but, then, it would not have been a summary.

Wolfle points out that many participants agreed that the scientist is partly to blame for the fact that the public does not understand and appreciate basic science. "The symposium said to all scientists, 'Get busy on this task'." It need hardly be pointed out to most scientists that one of the quickest ways to lose caste is to present research for public consumption, or, as Wolfle urges, to "get busy on this task." In England they do it well, at least on the Royal Society level. We seem to have no comparable society where it is not beneath the dignity of its members to present science simply and clearly to the public. The exceptions are those that have the function of collecting public funds for the conduct of research. Indeed, we don't have even one society where the different disciplines of science are explained to fellow scientists. It is one thing to obfuscate and, hopefully, to impress one's colleagues and quite another to enlighten and stimulate them by simplicity of presentation.

A number of straw men are set up by the participants in order to knock them down with a great show of righteousness and fury. This is quite natural but it does not add to the impressiveness of the symposium. It is much like too many italics, or too much underlining. Statements that "it is particularly difficult to secure support for work in new fields," simply leave one cold but allows the speaker to weep over a poor Wilhelm Röentgen who couldn't possibly have gotten a grant. Well, couldn't he! Do we still have to worry with such platitudes as, "the completely indispensable element in basic research is a scientist with an idea." If he hasn't got ideas he is not a scientist but rather a technician. And such discoveries as "basic new scientific ideas come from individual scientists and not from 'manpower'." Come, come, this type of verbigeration only throws dust in our eyes. It is hard enough as it is to keep the important points from being dissolved by that potent solvent called words.

The symposium illustrates how words confuse. At one time it is the individual investigator who is supported and no questions asked; a little later, it is the university that is to be supported and no questions asked. This is quite a different thing if you think it over. So we have the statement, "In the universities, the way to support all competent scientists is to improve and support the universities." There are many scientists who would not go along.

To me the most useful service that comes out of this symposium is that the subject of research, not just basic, has been opened up for public discussion. We must admit that the job was not well enough done, which simply reflects that many competent people are not well enough trained in thinking of this sort. We are all inclined to give "off the cuff" opinions about the conduct of research. And the farther we are away from its conduct the more we are inclined to be enamored of the sound of our own voices. There is much of deep importance to the furtherance of research today that is not even mentioned. Few, I think, would doubt, in a subject of this magnitude, that the posing of the right problems is not only the beginning of their solution but is a measure of the intellectual maturity of those doing the solving.

THE MECHANISM OF PROGRESSION OF ATHEROSCLEROTIC PLAQUES

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Research on atherosclerosis today takes many forms. The search for the fundamental cause of the disease continues, as it should; and during the past few years great emphasis has been placed on the development of regimens for the prophylaxis and treatment of clinically-apparent lesions. But it seems to me that one crucial aspect of the problem has been neglected—the elucidation of the reasons why early minimal lesions progress to casualty-producing proportions in some individuals but not in others. Actually the earliest recognizable lesions (the fatty streaks) are quite innocuous; they are probably reversible, but what is of more importance they have been shown by the late Dr. Russell Holman and his associates to be present in every child over the age of three years regardless of race, sex, diet, blood pressure, serum lipid level, or other known environmental or genetic influence.[1] What, then, is the mechanism by which these early lesions progress to later ones, particularly to the next stage in the process—the fibrous or "pearly" plaques? If this could be established, and the guilty factors successfully combatted, the final stage of clinically-apparent lesions might never be reached. Atherosclerosis would then cease to be a problem.

In the present paper the more important observations that have been published on the pathogenesis of the second stage atherosclerotic lesions will be reviewed, with the emphasis on the role of intimal haemorrhage in the process. In this latter respect I will follow the general lines laid down by the late Dr. Winternitz and his colleagues.[2, 3]

The second stage of atherosclerosis (the pearly plaque) is usually regarded as being made up of two, and only two, significant components—a dense capsule of fibrous tissue and a core of yellowish debris, rich in lipid. Calcification, which is so common later, is not in much evidence at this stage. However, it has recently been shown in our laboratory that pearly plaques consistently give a positive Prussian Blue reaction when they are subjected to gross staining procedures (Figure 1).[4] This positive reaction, we believe, reflects the presence of haemosiderin within the plaques; and if true, it is almost certainly the result of old intimal haemorrhage. The lesions in the other two stages of the disease (fatty streaks and end-stage plaques) have also been shown to contain haemosiderin, indicating that intimal haemorrhage is a characteristic feature of all phases of atherosclerosis. It has been so admitted recently by a pathology study group of the World Health Organization.[5] In any event, haemosiderin must now be considered as an additional component of the second stage of the disease, and any theory of pathogenesis of this stage, to be valid, must offer a plausible explanation for its presence.

By the filtration theory, which is by far the most popular one on this continent today, it is postulated that the plasma lipid mixture permeates the arterial wall by a process of non-selective filtration, and that high concentrations and/or instability of the lipid components predispose to their deposition in the arterial intima. The lipid core in pearly plaques is thus adequately explained; but not so the fibrous tissue and haemosiderin components. For many years the idea has been generally accepted that fibroplasia in atherosclerotic plaques is a reaction to the lipid deposits, although this has had very little experimental data to support it. Indeed, Waters has apparently not yet determined if the deposition of lipid *per se* is responsible for a change in the collagen content of the cornea when lipid is injected into such tissues of rabbits and dogs. However, he has found that those lipid injections that are followed by corneal vascularization and haemor-

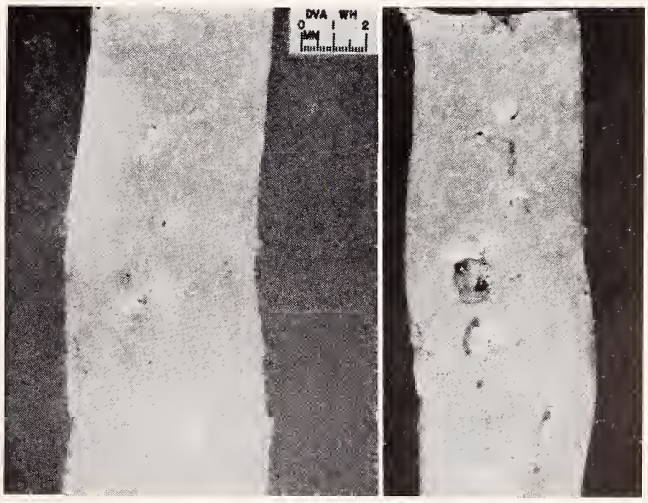

Figure 1. Segment of human thoracic aorta, reproduced from a coloured photograph.

Left—before exposure to Prussian Blue reaction; right—after exposure. It will be noted that most of the pearly plaques, or some parts of them, show a positive reaction.

From Westminster Hospital, Department of Veterans' Affairs, and the Collip Medical Research Laboratory, University of Western Ontario, London, Ontario, Canada.

rhage are associated with definite scar tissue formation.[6] In my own experience, microscopic examination of some atherosclerotic plaques reveals so much fibroplasia and so little lipid that I find it hard to conceive of a relationship between the two. Regarding the haemosiderin in pearly plaques, the proponents of the filtration theory have no explanation whatever to offer. They concede that this material may appear in endstage lesions as a "secondary" phenomenon, but seem to have made a particular point of ignoring its existence in fatty streaks and pearly plaques.

Our research group in London, Ontario, has one other piece of evidence that is damaging to the filtration theory. For the past six years, we have been assessing the claim of the "filtrationists" that the more lipid there is in the blood, the more fat there will be in the artery and the greater the severity of atherosclerosis. Levels of the serum lipids (total serum cholesterol, cholesterolphospholipid ratio and atherogenic index) have been determined serially in patients who are permanently confined to hospital and compared with the severity of atherosclerosis in the same patients at death and autopsy. No consistent significant relationships have yet been obtained in this study, nor have we detected any relationship between the levels of these lipid fractions and the incidence of sequelae of atherosclerosis that can be demonstrated at autopsy (e.g. cardiac infarction).[7, 8, 9]

Likewise, the local formation theory has little to offer in explaining the mechanism of progression of the earliest lesions. Its supporters postulate that the lipid in fatty streaks is synthesized by the mesenchymal cells of the intima, that the arterial wall is therefore an organ, and that this organ is the potential target for hormones or hormone imbalances.[10] But all that they can suggest in explanation of the transition of fatty streaks to pearly plaques is that the fibrous tissue proliferation is a reaction to lipids already synthesized. In this respect it is pertinent to ask why some fatty streaks show this response to irritation while others do not? The presence of haemosiderin in pearly plaques (and in fatty streaks) does not seem to be conceded by supporters of this theory; indeed, they regard intimal haemorrhage as an end result of the disease, and therefore of little pathogenetic significance in the earlier stages.

The supporters of the vascularization theory, on the other hand, offer a plausible explanation for the presence of all three major components of pearly plaques. And they do so by invoking a single mechanism—the rupture of intimal capillaries with the extravasation of blood into the adjacent tissues. Inherent in this concept is the fact that intimal capillaries arise, in large part at least, from the main lumen of the artery and are thus exposed to unusually high pressures. They have been referred to as "high-pressure" capillaries. I realize that many clinicians, and even some pathologists, do not admit that the earlier phases of atherosclerosis show these peculiar vessels. However, my experience has been that they are consistently present in pearly plaques; they can be demonstrated in some fatty streaks, particularly when special stains for endothelium are done;[11] and recently we have been able to demonstrate them, occasionally, in parts of the aorta that are entirely free from gross or microscopic evidence of atherosclerosis. An example of vascularization of the "normal" aortic intima is shown in Figure 2. By the vascularization theory, then, those fatty streaks that contain intimal capillaries may be the sites of capillary rupture and haemorrhage. As a result of repeated haemorrhages of this type (and of haemorrhages only) the fatty streaks, it is claimed, are converted into pearly plaques and later into end-stage complicated lesions. The mechanisms that apply in these transitions are given in the next paragraph.

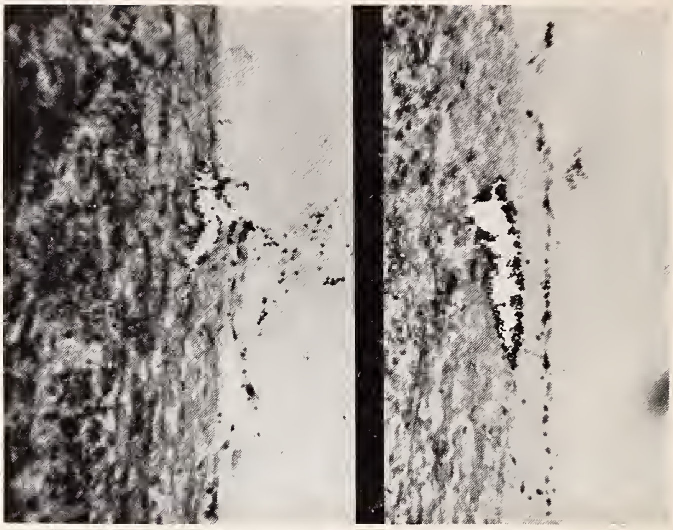

FIGURE 2. Photomicrographs of sections of part of an artery that was free from gross or microscopic evidence of atherosclerosis. No lipid was detected in the slightly fibrosed intima. A large intimal capillary, or sinusoid, is seen in each photograph. It was followed by serial section for approximately 360 microns before it petered out without re-entering the lumen. H. and E. x 100.

Left—shows the capillary arising from the arterial lumen; right—at its point of greatest penetration of the intima.

The origin of the lipid component of pearly plaques from haemorrhage can be easily explained. Years ago, Winternitz and his colleagues likened the process to the fatty accumulations that occur from haemorrhage in other parts of the body—notably in thyroid adenomas and in villonodular synovitis of the knee joint.[2, 3] More recently, Mann and Pullinger have demonstrated typical atheromatous deposits in close association with the corneal vascularization that occurs in the eyes of rabbits exposed to mustard gas;[12] the deposits were found in animals that were *not* fed cholesterol, indicating that hypercholesterolemia is not essential to their formation. Likewise, the fibrous tissue component of pearly plaques can be laid very simply to organization of the haemorrhage. Not only will there be fibroblastic proliferation in this process, there will also be an abundance of newly-found capillaries. And these new capillaries will be susceptible in turn to rupture so that "vascularization of the intima initiates a vicious circle whereby haemorrhage stimulates repair and repair predisposes to haemorrhage."[13] The third major component of pearly plaques—haemosiderin—is almost certainly the result of phagocytosis by macrophages of red cells lying free in the tissues. Buck has recently shown an electron microscopic photograph of such a process; it illustrates in a most interesting way extravasated red cells in the vicinity of, and apparently being engulfed by, a macrophage in a pearly plaque.[14]

The discussion of the thrombogenic theory of Rokitansky and Duguid has been left to the last—for reasons that will soon be apparent. Originally, it was postulated by this theory that the primary change in atherosclerosis is the deposition of tiny nubbins of fibrin on the intimal surface, that these deposits organize into fibrous tissue, and that successive deposits, each of which organizes in turn, are laid down in strata on the primary deposit.[15] The fibrous tissue component of pearly plaques is thus adequately explained, and since red cells might easily be enmeshed in the fibrin clots the origin of the haemosiderin component is also evident. But the theory falls down when it attempts to account for the lipid content of plaques. The original explanation offered was that the lipid core of pearly plaques resulted from fatty degeneration of the organizing tissue, in a fashion not unlike the softening that occurs in mural thrombi. This view seems now to have been abandoned: in one of Duguid's recent publications[16] he seems to accept the conclusion of Morgan (and that of a few of us in North America) that "the cholesterol and other fatty debris in atherosclerosis are products of blood destruction and can be accounted for by small haemorrhages recurring over long periods."[17] It therefore seems fair to state that the thrombogenic theory is now firmly linked to the vascularization theory. I find this merger attractive; indeed, I am becoming more and more convinced that vascularization of the intima begins during the process of organization of the tiny fibrin nubbins described by Duguid—or as I stated many years ago, "in secondary relation to partial thrombosis."[18]

It will be very evident from the foregoing that I favour the vascularization theory in explaining the mechanism of progression of atherosclerotic plaques. Or stated in another way, it seems that the critical factor lies in recurrent capillary rupture with the leakage of blood into the intima of arteries. This mechanism should apply, not only in the conversion of fatty streaks to pearly plaques, but in the production of end-stage lesions and their sequelae as well. The manner in which the latter are produced, in particular the relation of intimal haemorrhage to the initiation of coronary thrombi, has been described in detail elsewhere.[19] However, I am willing to concede that other factors may play a secondary role in the progression of the earlier lesions. For example, if the extravasations of blood are rich in lipid, as they would be in persons with frank hypercholesterolemia, more lipid should be left behind per unit of shed blood than if the serum lipid levels were low. And again, since intimal haemorrhage is a disruptive lesion, thromboplastic substances may be liberated at the site of injury and cause the initiation of mural thrombi of the type described by Duguid. But it is obvious that each of these secondary factors will be dependent on the primary lesion of capillary rupture, so much so that I would suggest that the progression of atherosclerosis (but not necessarily its initiation) is in truth a *disease of capillaries*. Unfortunately, the exact mechanisms involved in the rupture of these small vessels have not yet been designated; and until they are understood, and successfully combatted, the control of the clinically-evident stage of atherosclerosis will probably never be achieved.

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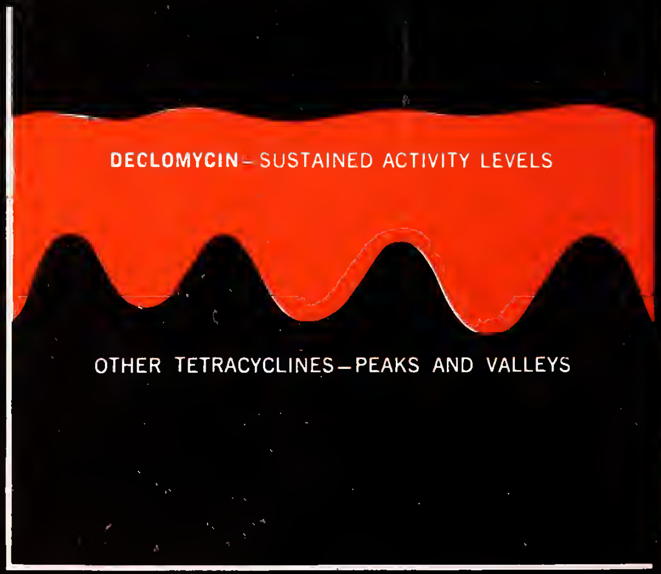

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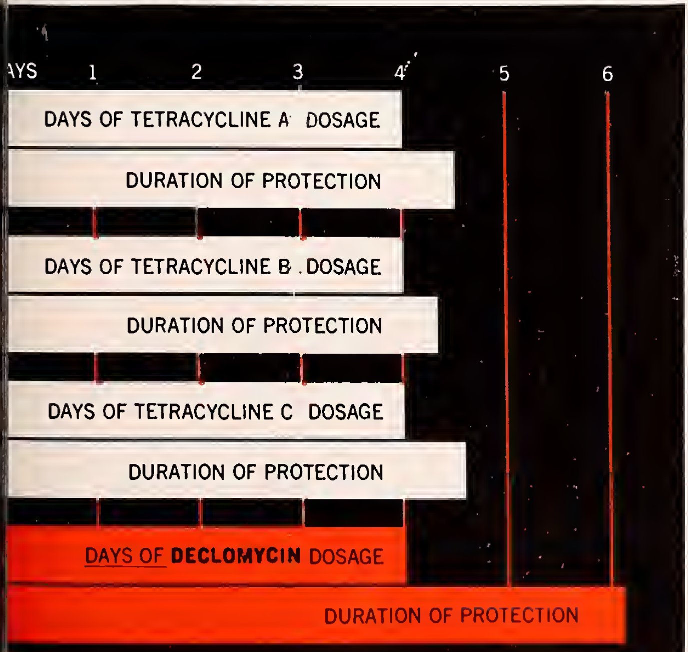

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Plan Now To Save The Dates

THE IMPACT OF THE NEW HEMORRHAGIC DIATHESES ON THEORY AND PRACTICE

J. H. Milstone,* *New Haven*

Textbooks of pathology, even recent ones, often summarize the process of blood coagulation in the following manner:

1. Prothrombin
↓ in the presence of Thromboplastin and Calcium
Thrombin
2. Fibrinogen
↓ in the presence of Thrombin
Fibrin Clot

This is usually called the classical theory; and it is well over 50 years old. Any theory that can endure for so long in so controversial a field must have some particular advantage. In this case the answer lies in the elasticity of the term, "thromboplastin." This vague and ambiguous term has been stretched to cover a wide diversity of opinion, and a deep gap in our knowledge. And with the remainder of the statement a matter of common agreement, the theory offered what Winternitz might have called a "meeting of the minds."

The two-stage idea had its origins before the beginning of the century; and the interaction of theory and practice was evident from early times. In 1901 and 1902 Arthus[1,2] used a two-stage test to study the production of thrombin during the clotting of blood. In 1917, Mellanby[3] employed a two-stage system more like those now in use. In his first-stage reaction, he had a mixture of crude prothrombin, tissue extract and calcium. As thrombin was produced by this mixture, samples were removed and tested on fibrinogen in the second stage. The more thrombin there was in the sample, the faster it clotted fibrinogen. By sampling the first-stage mixture at intervals, the production of thrombin could be followed.

THE PROTHROMBIN ERA

Arthus and Mellanby had been more interested in *when* and *how fast* thrombin was produced than *how much*. If the emphasis were put on *how much*, then the two-stage system could be used to assay the amount of prothrombin present in plasma. This type of assay was refined by Warner, Brinkhous, and Smith[4] and used to demonstrate the low prothrombin after experimental liver injury, in hemorrhagic disease of the newborn[5] and in other conditions.

Meanwhile, Quick[6,7] had developed a one-stage test for prothrombin, now known generally as the "prothrombin time" (Table I).

Table I
The Prothrombin Time of Quick

0.1 cc. Oxalated Plasma
0.1 cc. Rabbit Brain Thromboplastin
0.1 cc. Calcium Chloride
Normal Time for Clotting of Mixture, 12 seconds.

Quick's test was also based on the classical two-stage theory. He reasoned that when optimal amounts of thromboplastin and calcium were added to plasma, the clotting time was a direct measure of the prothrombin content of the plasma. This test led Quick to the conclusion that prothrombin was frequently diminished in jaundiced patients. And it has since gained world-wide use in the control of dicumarol therapy.

Objections were raised that Quick's test was not specific for prothrombin. But, as the exceptions appeared, they did not render the test obsolete. Rather, they extended its usefulness into the realm of the new hemorrhagic diatheses.

These hemorrhagic diseases can often be found in their purest and surest forms when they occur as congenital constitutional defects. In such cases, a list of pertinent findings has a validity of its own, regardless of whether it is assumed that each clinicolaboratory syndrome represents a deficiency of a distinct factor. A brief list is presented in Table II, where it can be seen that the prothrombin time is prolonged in three of the syndromes and normal in the other three.

THE "ACCELERATORS"

Parahemophilia was described by Owren during 1944-7[8] and congenital SPCA deficiency by Alexander, Goldstein et al.[9] in 1951. In each condition, the abnormal prothrombin time could be corrected by addition of normal plasma. Normal human serum rectified the clotting tests in SPCA deficiency but not in parahemophilia. Notwithstanding the

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prolonged prothrombin time, the prothrombin content of the plasma has been normal in each syndrome, when assayed by modern two-stage techniques. On the basis of this and other evidence, it has been proposed that two "accelerator" factors are necessary for a normal prothrombin time. One of them, called factor V or proaccelerin is thought to be deficient in parahemophilia. The other, called pro-SPCA, (pro-Serum Prothrombin Conversion Accelerator) or factor VII is thought to be deficient in the SPCA syndrome.

As time has gone by, it has become clear that names, techniques and interpretations might vary considerably; but the clinico-laboratory syndrome was reasonably constant. With regard to SPCA, the original patient has become the standard of reference for the deficiency state,[10] even though an SPCA factor was described[11] long before the congenital defect was found.

For a while, the theoretical result of these developments was to superimpose two new factors on the classical theory. They were supposed to accelerate the production of thrombin from prothrombin, in the presence of thromboplastin and calcium.

"BLOOD THROMBOPLASTIN"

Meanwhile, the term, "thromboplastin" has continued to serve the needs of the times in its historically flexible manner. During the past 15 years, the term has been used with the implication that it denotes a prothrombin activator or activator complex, without very clear decision on the nature of the activator, or how much the activator complex should include. In practice, thromboplastin has often been measured by its capacity to accelerate the clotting of normal plasma. This is convenient and useful; but it is not rigorously specific for the activator of prothrombin. Thromboplastin occurring in crude tissue extracts has been called "extrinsic"; that occurring in blood derivatives has been called "intrinsic."

It has long been known that thromboplastin is obtainable from the blood. When blood is collected with the utmost care to avoid contamination by the juices of injured tissue, it nevertheless clots in a glass tube. During the process, its prothrombin becomes converted to thrombin, which is then susceptible to antithrombin. So, after the clotting of fibrinogen, the thrombin continues to dwindle. After an hour, little thrombin can be found, and little prothrombin either. This is the normal "prothrombin consumption." It depends on the conversion of prothrombin, which in turn depends on the production of thromboplastin from the blood, itself.

If this mechanism is faulty, as it is in hemophilia, an appreciable amount of prothrombin remains in the serum; and the prothrombin consumption is said to be abnormal. Hemophilic blood is not a good producer of thromboplastin, but this is compensated if extrinsic thromboplastin is supplied. This is done routinely in the Quick test; so the prothrombin time is normal in hemophilia.

What is the source of blood thromboplastin? The prevailing opinion favored the platelets, until a change of viewpoint occurred during 1947-8. In rapid succession, results were published which indicated that platelet extract was a poor substitute for thromboplastin in the Quick test,[12, 13] that washed and lysed platelets caused only slow activation of prothrombin in a two-stage system[14] and, a short time later, that platelet extracts caused only slow production of thrombin from physiologic concentrations of prothrombin.[15] It was also reported that a globulin fraction, together with platelets, caused a rapid production of thrombin;[14] and later evidence indicated that the globulin factor represented the prime activator.[16] This factor has been called thrombokinase in this laboratory. During the past decade, it has generally been considered that "blood thromboplastin" arises from the interaction of plasma and platelets, with increasing attention paid to the plasma.

The antihemophilic globulin appears to be necessary for the normal production of blood thromboplastin; and it corrects the defect when added to hemophilic blood. But its mode of action is not understood. Nor is it unanimously agreed that a lack of the factor is the essential defect in hemophilia. Tocantins[17] still maintains that the principal abnormality is an excess of antithromboplastin. This view has received support from Pavlovsky[18] and from Johnson.[19] Pavlovsky, in 1947, made the very interesting observation that the blood of some hemophiliacs rectified the defect in the blood of other hemophiliacs, so that a mixture of the two would clot almost normally. The correct explanation of his original observations is not yet clear. But the report stimulated others to consider the possibility that there might be two or more different diseases commonly diagnosed as hemophilia.

PTC deficiency was described by Aggeler, White et al. in 1952[20] and PTA deficiency by Rosenthal et al. in 1953.[21] Both syndromes resemble hemophilia in that the prothrombin consumption is impaired and the clotting time may be prolonged; whereas the prothrombin time is normal. PTC deficiency is inherited as a sex-linked recessive and is clinically much like hemophilia. About 15 per cent of cases previously diagnosed as hemophilia are now known to be PTC deficiency. On the other hand PTA deficiency occurs in both sexes with

Table II
Hemophilia and the New Hemorrhagic Diatheses

NAME GIVEN TO CONSTITUTIONAL DEFECT	PROPOSED HEREDITARY PATTERN	PROTHROMBIN TIME	THROMBOPLASTIN GENERATION TEST	CORRECTION BY NORMAL HUMAN SERUM
Parahemophilia	Autosomal* Recessive	Prolonged	Abnormal	No
SPCA Deficiency	Autosomal Recessive	Prolonged	Normal	Yes
Hemophilia	Sex-Linked Recessive	Normal	Abnormal	No
PTC Deficiency	Sex-Linked Recessive	Normal	Abnormal	Yes
PTA Deficiency	Autosomal Dominant	Normal	Abnormal	Yes
Stuart Defect	Autosomal Recessive	Prolonged	Abnormal	Yes

* Not sex-linked.

female patients predominating, and is generally milder, with much less tendency to hemarthroses. Matching experiments have been done with blood specimens from the three diseases; and blood from each disease has corrected the defect of the other two. The designation PTC deficiency expresses the conclusion of the discoverers that the condition is due to lack of a Plasma Thromboplastin Component. In the other condition, it has been proposed that a Plasma Thromboplastin Antecedant is deficient. Christmas disease[22] was reported in December, 1952, and is now accepted as identical with PTC deficiency.

At this point, it appeared that the newly discovered diatheses could be separated neatly into two categories. Those with prolonged prothrombin times were thought to lack an accelerator. Those with normal prothrombin times but poor prothrombin consumption were thought to lack specific factors needed for the generation of blood thromboplastin. (Table II).

THE THROMBOPLASTIN GENERATION TEST

Mere mention of thromboplastin generation implies that the process of clotting involves at least one stage before the two shown in the "classical theory." Actually, early investigators were well aware of this preliminary step, which was not diagrammed in the text-book simplifications. And it is possible to set up a three-stage technique,[23] in which the stages correspond directly to those of the old three-stage theories. In practice, such a system is cumbersome. However, Biggs, Douglas and Macfarlane,[24,25] introduced an ingenious arrangement adaptable to the needs of the specialized clinical laboratory.

As indicated in Table III, their thromboplastin generating mixture is made with four reagents, and these contain, in the order listed: antihemophilic globulin (also called factor VIII), platelets, PTC, (also called Christmas factor, or factor IX), and calcium. The thromboplastin is assayed in a modified Quick test. With a known normal plasma, "thromboplastin" is assumed to be the variable which determines the clotting time. As in the Quick test, theoretical objections have been raised against the thromboplastin generation test. And there is serious doubt whether this test should be used for diagnosis by any except the expert. Nevertheless, it has been widely useful in the hands of those skilled in its performance and interpretation. One by one, reagents prepared from the patient's blood are substituted for the first three reagents in an otherwise normal system. If the patient is a hemophiliac, the test will be abnormal when the alumina-treated plasma is his. If a patient's platelets are functionally abnormal, this may be revealed when his platelets are used in the test. If he has PTC deficiency his alumina-treated plasma and his platelets will give normal results, but his serum will not.

While yielding this beautiful consolidation, the thromboplastin generation test also made a crack in the façade of clinical classification. Factor V, which had been called an accelerator, was reported to be necessary for normal thromboplastin generation.[26] The crack was widened when the Stuart defect was described by Hougie, Barrow and Graham in 1956. "The Stuart factor appears to be necessary for both a normal prothrombin time

Table III
The Thromboplastin Generation Test

A. *Thromboplastin Generating Mixture*
0.3 ml. Alumina-Treated Plasma, diluted 1 to 5
0.3 ml. Platelet Suspension
0.3 ml. Serum, diluted 1 to 10
0.3 ml. Calcium Chloride
At each minute, for six minutes, a sample is withdrawn and assayed for thromboplastin, as follows:

B. *Thromboplastin Assay*
0.1 ml. Citrated Plasma
0.1 ml. Thromboplastin-Generating Mixture
0.1 ml. Calcium Chloride
Clotting Time of mixture often as fast as 8-12 seconds, when thromboplastic activity fully developed.

and for a normal thromboplastin generation test. This is disturbing because the characteristics of Stuart factor cut across our usual thought categories."[27]

In other words, we cannot really distinguish the "accelerators" from the "thromboplastin factors" by the usual criteria of the clinical laboratory. The distinction may yet prove to have some validity, if it becomes more firmly established by biochemical investigations. Meanwhile, new discoveries have come faster than they could be assimilated. Ratnoff and Margolius[28] have described a familial (Hageman) trait characterized by a prolonged clotting time in glass, but no hemorrhagic diathesis. Apparently, Hageman blood responds normally to contact with injured tissue but not to contact with glass. Much work has been done on the purification and testing of the proposed new factors; and we will become more certain of their existence as distinct entities to the extent that their properties and functions become delineated more clearly. Some authorities prefer to use Roman numerals for the designation of those factors which they recognize as distinct entities, without assumptions with regard to their biochemical action.

Approaching the problem from the other end, one can define a clotting factor by its biochemical function, without assumptions concerning its relation to disease. This has been done in the case of thrombokinase, definable as activator of prothrombin. This factor has been obtained from plasma in a highly purified state, approaching electrophoretic homogeneity.[29] It is a trypsin-like enzyme, whose action on prothrombin, or on the synthetic substrate, TAMe, is inhibited by soy bean trypsin inhibitor. It is potentiated by platelets plus calcium; and it may well be the prime specific factor produced in the thromboplastin generation test.

DIAGNOSTIC AND THERAPEUTIC IMPLICATIONS

A patient's history will often reveal an abnormal bleeding tendency that is evoked only by moderately severe trauma, dental extractions or operations. This is particularly so in the PTA group of patients, which includes females as well as males. But mild cases may occur even among those with classical hemophilia. In some cases, routine tests may not give adequate warning of a bleeding tendency; and special tests still require too much art for merely occasional performance. This throws the major burden on the taking of a careful personal and family history.

All the defects outlined in Table II can be corrected by fresh plasma, and some by aged plasma or even serum. All conditions have responded favorably to treatment by transfusion. Special plasma fractions may not be helpful if they do not match the patient's defect. For example, potent preparations of antihemophilic globulin have not been effective in PTC deficiency.

In addition to the congenital defects, acquired deficiencies have been described. Perhaps the commonest is that induced by the dicumarol-type drugs. Some investigators now believe that not only prothrombin, but also SPCA, PTC and Stuart factor are reduced by these drugs. With the view that a proper test should be sensitive to a decline in any one of these factors, Owren[30] has recently devised a laboratory "thrombotest," which he believes will make the control of anticoagulant therapy safer, simpler and more adaptable to long-term treatment. Its use has been instituted in Norway; and evaluation of the test in the United Kingdom has begun.[31]

SUMMARY

1. During the last two decades, five hemorrhagic diatheses have been newly described and differentiated from classical hemophilia. Each type of clotting defect has been corrected by normal plasma; and each condition has responded favorably to treatment by transfusion. Each defect has commonly, but not unanimously, been ascribed to a deficiency of a specific plasma factor. Much that has been said about the new hemorrhagic diatheses and the proposed new factors must still be regarded as tentative.

2. These developments have brought the theory of blood coagulation to an ebulliently fluid state, and have opened up vast areas for exploration. It is now generally agreed that the blood, itself, can produce a potent activator of prothrombin, and that the clotting process involves at least three stages.

3. The new observations have immediate significance for the recognition and management of hemorrhagic tendencies. Consideration of the proposed new factors has led to the institution, in Norway, of a new test for the control of anticoagulant therapy.

4. As Winternitz said, pathologic states offer unusual opportunities for the discovery of normal mechanisms.

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THE ROLE OF THE ADRENAL CORTEX IN WATER DIURESIS

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DIAGNOSIS OF ADRENAL INSUFFICIENCY

In 1931 Rowntree and Snell published a clinical study of Addison's disease in which they noted the characteristic failure to excrete water at a normal rate following an oral water load.[1] A similar abnormality was described in experimental animals in 1933.[2] Subsequent studies provide ample evidence that animals of a variety of species cannot excrete excess water at a normal rate in the absence of adrenal steroids even though their adrenal insufficiency may be masked or compensated by a high NaCl intake.[3]

The "Robinson-Kepler-Power" or "water load" test was introduced in 1941 as a screening test for adrenal insufficiency in man and has found wide use.[4,5] Similar tests have been helpful in ascertaining completeness of adrenalectomy in experimental animals. The advantages of this diagnostic maneuver are its simplicity and accuracy. It is useful in ruling adrenal insufficiency out but does not prove it to be present since a number of diseases can result in delayed diuresis. Essentially the test measures the ability of the individual to excrete a water load equal to two per cent of his body weight in a period of three to four hours.

PHYSIOLOGICAL SIGNIFICANCE OF DELAYED DIURESIS

It seems paradoxical that the adrenalectomized animal should be slow at excreting water since excessive loss of water and electrolytes is one of the cardinal signs of adrenal insufficiency, in which wasted sodium is accompanied by water. The failure of water diuresis is, however, unaffected by NaCl supplementation and is clearly independent of the renal disposition of sodium.[6]

The normal sequence of events following water ingestion is absorption with resultant decrease in plasma osmolarity and inhibition of the release of the anti-diuretic hormone of the posterior pituitary (ADH). This results in the decreased renal reabsorption of water and the production of a dilute urine.

We therefore have several possible points of action that might be involved in the failure of water diuresis. The first of these is absorption from the gut, and indeed it is well established that the adrenalectomized animal absorbs water at a considerably slower rate than does the normal control.[5] However slow absorption is not an adequate explanation since the same failure of excretion occurs if the water is injected intravenously as a solution of glucose or saline.[7]

Secondly, we may ask whether the serum osmolarity fails to fall in a normal fashion after water absorption. There is no evidence for this since in general the serum Na concentration tends to fall further in the adrenal insufficient animal than in the normal control.

A strongly supported hypothesis has been that the abnormal response to water is due to excessive ADH secretion or to excess sensitivity to ADH after adrenalectomy. This hypothesis has now been largely abandoned for the following reasons: The hypophysectomized animal (or person), lacking ADH as well as most adrenal cortical activity, is also unable to achieve rapid diuresis. In addition, it has not been shown that adrenalectomy results in increased sensitivity to injected ADH. Furthermore, the validity of experiments demonstrating increased circulating anti-diuretic substances in adrenal insufficiency has been questioned.[8]

A fourth possibility that might explain the failure to excrete water rapidly is alteration of renal hemodynamics (decreased renal blood flow and glomerular filtration rate). Indeed a 20 to 30 per cent reduction in these parameters has been frequently observed following adrenalectomy or in Addison's disease. However, it has also been shown that this does not always occur, that steroid replacement therapy sometimes corrects the water retention without affecting the GFR,[9] and that raising the GFR by other means does not increase water excretion to normal in adrenal insufficiency.[10]

Finally, it seems inescapable that one of the characteristics of the animal without adrenal steroids is the inability to prevent the reabsorption of water in the renal tubule. The normal mechanism of producing dilute urine is believed to be the reabsorption of solute without water. This requires a membrane (in the distal tubule and collecting ducts) that is impermeable to water in the absence of ADH. The manner in which this impermeability is maintained with the aid of the hormones of the adrenal cortex is, of course, quite unknown.

In addition to the apparent renal action of the cortical hormones in water diuresis, there is evidence of an extra-renal effect on the distribution of salt and water that is sufficiently well documented to make its existence probable. The nature of this effect is elusive and it has proved difficult to define and to separate from the renal mechanism.

This extra-renal effect was first described by Swingle in 1935 and has been the subject of some debate ever since. Swingle[11] noted that the estimated decrease in extracellular H_2O and Na could not be accounted for by the amount lost in the urine. He therefore postulated that in adrenal insufficiency a shift of H_2O and Na occurs from the extracellular space (ECF) to the intracellular space (ICF). Several subsequent investigators have supported Swingle's original observation.[12,13] Indeed recent studies by Mendelsohn and Pearson,[14] in which they observed the effect of steroid withdrawal on adrenalectomized patients, tend to minimize the importance of the renal losses of H_2O and Na in the onset of clinical collapse in adrenal insufficiency (under these circumstances). Furthermore, Swingle has been able to maintain adrenalectomized dogs on a low salt diet with the use of a synthetic steroid that has a powerful "gluco-corticoid" effect without any sodium retaining activity. These animals had normal blood volumes and pressures, and general well being despite low serum sodium concentrations.[15]

One of the weak points in the theory of an extra-renal adrenal cortical effect has been the difficulty of showing where the Na goes when it leaves the ECF if it is not lost in the urine. No investigator has been able to demonstrate convincingly that intracellular Na increases in adrenal insufficiency. Of course all such conclusions are dependent on an accurate method of measuring the ECF. Unfortunately there is no sure way of doing this, particularly in abnormal states such as adrenal insufficiency in which changes of permeability may occur.

As far as water is concerned, one consistent effect of adrenalectomy is an increase of total water. This has been shown to involve most of the tissues studied, including the blood. The adrenal steroids have a dehydrating effect when administered to such animals. It has been presumed that the increase in total water is largely intracellular but it has not been shown that the increase in cell water is out of proportion to the increase in extracellular water.[16]

An interesting property of the adrenal steroids is their protective action against water intoxication, to which adrenalectomized animals and persons are particularly susceptible.[3] A large part of the beneficial adrenal effect is due to the accelerated formation of urine by the water-loaded animal when treated with adrenal steroids. However, an extra-renal protective action has been demonstrated in nephrectomized animals.[17]

In conclusion we see that the positive "water test," a simple screening procedure for adrenal insufficiency, reflects rather profound alterations in water metabolism. We find not only a decreased rate of glomerular filtration and an inability to block the reabsorption of water (in the distal tubule and/or collecting duct), but also an extra-renal disturbance resulting in increased tissue hydration as well as probable migration of sodium and chloride ions out of the extracellular space to sites unknown. An understanding of these effects would greatly clarify our knowledge of the manner in which the adrenal steroids (and perhaps other hormones) function in the homeostasis of the internal environment.

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ACUTE BILATERAL PNEUMONITIS ASSOCIATED WITH THE INHALATION OF MERCURY VAPOR

Report Of Five Cases

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THE vaporization of metallic mercury exposed to the air at room temperature has long been recognized as a potential source of chronic mercury poisoning in man. The well known "Mad Hatter" of Alice in Wonderland is a classic reference to the neurological manifestations which so characteristically accompany such poisoning. While information concerning the factors influencing the development of chronic poisoning are well documented, there has been little discussion of acute poisoning due to mercury vapor. A few reports describing the development of pneumonitis following exposure to high concentration of mercury vapor have appeared.[1,2] Recently we have had the opportunity to study several individuals exposed to excessive amounts of mercury vapor, one of whom died of severe pulmonary disease. We are reporting this experience to emphasize the danger that exists when large amounts of warm mercury are spilled and to describe the characteristic anatomical findings in the lungs of individuals dying following such exposure.

PRESENT REPORT

In September, 1954, eight workers were exposed to high concentration of mercury vapor at a utility plant as a result of a tube rupture below the liquid level in a mercury vapor boiler used for generating electricity. The rupture of the tube resulted in spillage of large amounts of mercury, and instant volatilization of mercury took place. The volatilized mercury escaped from the boiler through ductwork leading to an induction air fan in the stack. Subsequent condensation which took place in the stack was accelerated by drop in temperature after the fire was extinguished in the boiler. The condensed mercury collected in the ductwork leaked through joints connecting the boiler, induction fan and smoke stack, and dropped to the floor flowing through open grill work to the floors below. Mercury lodged in and about the various structural supports of the boiler including the asbestos covering of the air ducts and crevices in the concrete floor. The largest quantity, which amounted to several tons, collected on the maintenance floor area below the boiler proper. This mercury was warm but not hot enough to burn the skin. Most of the eight men were exposed without precautionary measures for about five hours while engaged in attempts to recover the spilled mercury. They worked from about 4 p.m. until 9 p.m. When they returned home, they developed shaking chills. Several of them complained of nausea and general malaise, tightness in the chest and vague respiratory symptoms.

The day following the accident none of the men worked but they improved symptomatically. However, some complained of aching pain in the lower jaw. All continued to improve clinically during the next 48 hours, although they continued to have tightness in the chest and slight pain in the lower jaw. One man complained of severe difficulty in breathing with episodes of paroxysmal coughing and pain in the chest. Because of the increasing severity of his respiratory difficulties, he was treated with antibiotics and was thought to have a viral or bacterial pneumonitis. He became rapidly worse and expired at home without further therapy. This patient was entirely well prior to this episode. A postmortem examination was performed and the findings will be described in detail. The findings in four others admitted to the hospital will also be presented.

CASE I—W.S.

This patient expired at home 72 hours after exposure and was brought to the hospital for postmortem examination.

Gross Anatomical Findings: The external examination of the body showed a moderate cyanosis of lips and nail beds. The mouth was edentulous, the mucous membranes of the mouth were intact. The heart weighed 350 gm. and was normal. The lungs presented a striking picture, in situ they appeared distended and had smooth shiny slate-grey pleural surfaces. The right weighed 1,000 gm. and the left 800 gm. The bronchi and trachea had slightly reddened mucous membranes which appeared intact. On palpation, the lungs had a rubbery subcrepitant consistency. The cut surfaces had a red beefy appearance which was uniform throughout all lobes with only a few small areas presenting a normal appearance. A red tenacious thin fluid exuded from

From the Departments of Pathology and Medicine, Hartford Hospital.

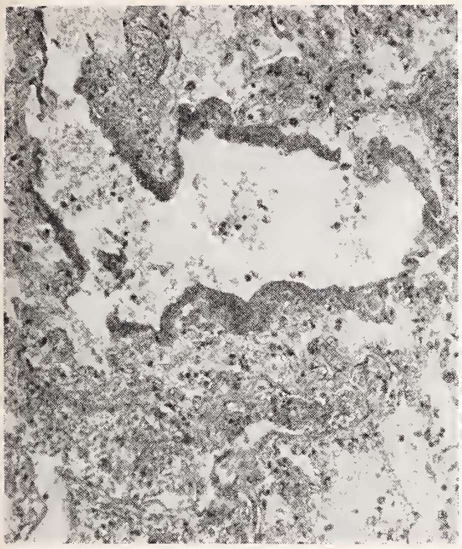

Figure 1

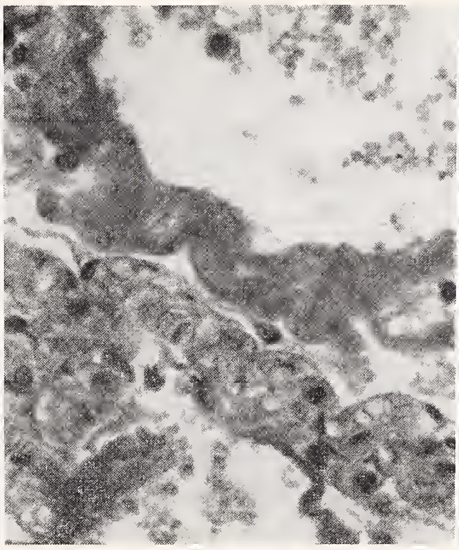

Figure 2

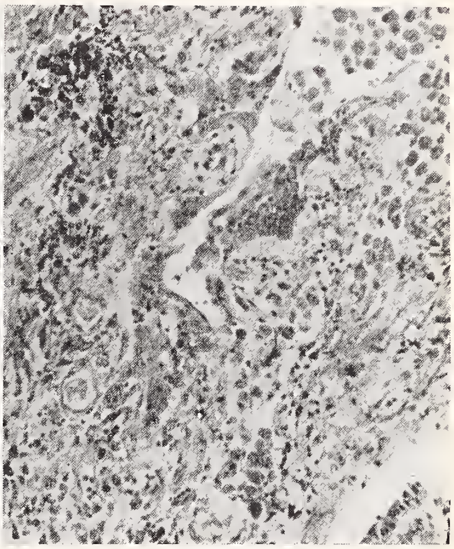

Figure 3

Fig. 1, Case I: Lungs show congestion, edema and fibrinous material forming hyaline membrane. H & E x 200

Fig. 2, Case I: Alveolar wall showing hyaline membrane, congestion of vessels. H & E x 800

Fig. 3, Case I: Shows striking alveolar lining cell proliferation and interstitial edema with minimal cellular infiltration. H & E x 200

the cut surface and no purulent material could be expressed. The appearance suggested consolidation such as is seen in an interstitial type of pneumonitis.

The liver, kidney and other viscera had a normal gross appearance.

Microscopic Examination: Sections of the lungs showed a diffuse pneumonic process which was characterized by a marked interstitial edema. The alveolar spaces contained edema fluid with a minimal amount of cellular exudate, chiefly lymphocytes. Many of the alveolar spaces were lined by a fibrinous material which formed a pink hyaline membrane similar to that seen in viral pneumonitis (Figure 1 and 2). Zones of atelectasis were associated with such areas. The alveolar lining cells appeared swollen and in numerous areas active proliferation of these cells was seen and many showed mitoses (Figure 3 and 4). A proliferation of lining cells of terminal bronchioles is present particularly at the junction of the respiratory ducts. In these regions the cells showed a tendency to be piled into several layers. Section of the trachea and larger bronchi showed intact epithelial lining with congestion of the blood vessels in the submucosa.

Sections of the kidney, liver and brain were normal.

Bacteriology: Routine culture of the lungs showed no growth of organism. Portion of lungs were submitted to Bacteriology Department of Children's Hospital, Boston for viral studies and no viruses were isolated.

Toxicology Examination: Specimens of liver, kidney and lung were analyzed for mercury at the Connecticut State Department of Health Laboratory with the following results:

liver	1.13 mgm. of mercury per 100 gm. of tissue
kidney ..	4.7 mgm. of mercury per 100 gm. of tissue
lung	0.36 mgm. of mercury per 100 gm. of tissue

On the basis of these observations, a diagnosis of acute diffuse interstitial pneumonitis, secondary to inhalation of mercury vapor, was made.

The other workers who had been exposed at the time of the deceased were admitted to the hospital for clinical evaluation of their status four days after the exposure. Summary of their findings are as follows:

CASE II—J.W.

A 44 year old male who was exposed to mercury for about three hours. Three to four hours after onset of the exposure, he noted generalized malaise, joint pain and vague headache. The following day he developed a cough, anterior chest pain and metallic taste in the mouth. He remained at home for one day and then returned to work but continued to have joint pains, mild dyspnea and cough. He was admitted to the hospital four days after exposure for evaluation of his pulmonary status.

Physical examination showed a well developed and nourished white male with no complaints. Temperature was 98.6° F. and BP 120/70. The examination was negative except for scattered moist rales in both lungs. The laboratory data showed hematocrit 43, WBC 6,600, with normal differential and a sedimentation rate of 44 mm. per one hour (Westergren). Urine examinations were negative. X-ray of chest showed diffuse interstitial thickening throughout both lung fields consistent with an interstitial type of pneumonitis. The patient remained in the hospital five days and was treated

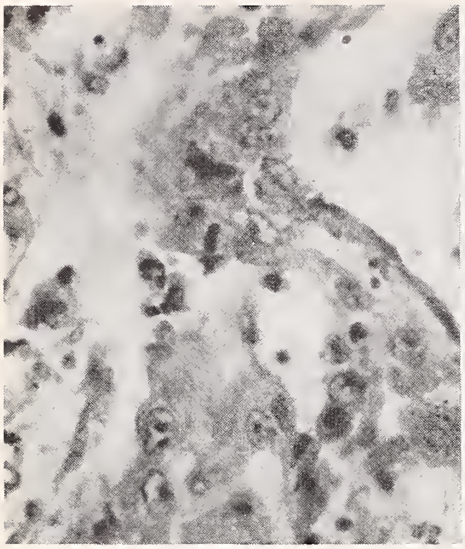

FIGURE 4

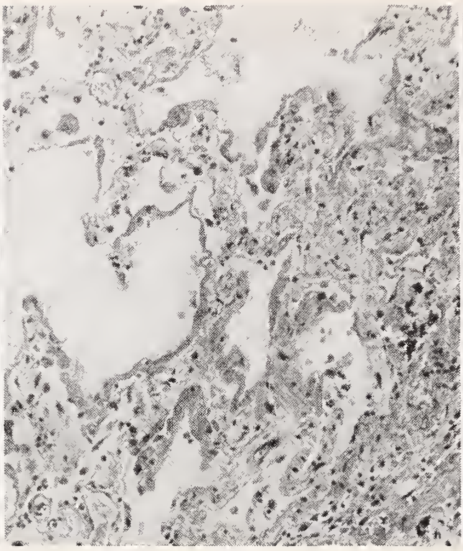

FIGURE 5

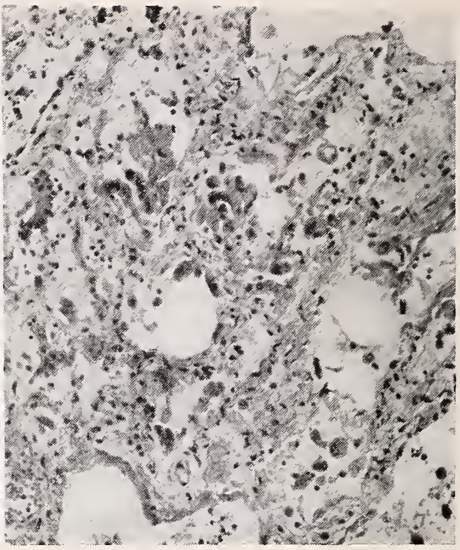

FIGURE 6

FIG. 4, CASE I: Prominent alveolar lining cells showing mitotic activity. H & E x 800

FIG. 5, OLD CASE: Lung shows hyaline membrane, congestion of vessels and interstitial edema. H & E x 200

FIG. 6, OLD CASE: Lung shows prominent alveolar lining cells, minimal cellular exudate and hyaline membrane. H & E x 200

with Bal and penicillin. A repeat chest X-ray a day before discharge showed slight clearing of the changes in the lung fields.

CASE III—N.Y.

A 54 year old male had a similar exposure. He developed generalized malaise, weakness and headache four hours after onset of the exposure. The next day he complained of marked pain in the teeth and gums. He had no cough, chest pain or dyspnea. Urinary output had been normal. He was admitted for evaluation on the fourth day. Physical examination showed him to be well nourished and in no distress. The temperature was 99.4° F., BP 120/80. The lungs showed medium rales at left apex but otherwise the examination was negative. Laboratory data showed hematocrit 39.5, WBC 7,000 with normal differential. The sedimentation rate was 39 mm. per one hour. The urine examination was negative. Chest X-rays were negative except for slight increase in the markings in the left lower lobe. He was treated with Bal and penicillin and was discharged five days after admission, free of complaints.

CASE IV—E.P.

A 48 year old white male, who at the time of his exposure to the mercury vapor had an upper respiratory infection. He developed extensive generalized malaise, muscular aches and headache four hours after onset of the exposure. The following day he felt better, but developed cough and dyspnea. For the three days prior to admission he had fever up to 102° F. Pain in his gums and teeth developed several hours after exposure but had subsided at the time of his admission to the hospital.

Physical examination showed a well nourished male with temperature of 99.8° F., pulse of 72 and BP 100/68. The examination of lungs showed medium moist rales at the left apex and base and also right base. There were diffuse inspiratory and expiratory wheezes throughout both lung fields.

Laboratory data showed hematocrit 48 and sedimentation rate of 40 mm. per one hour. WBC was 7,000 with normal differential. Urine examinations were negative. X-rays of the chest showed a diffuse peribronchial thickening throughout both lung fields. He was treated with Bal and penicillin and discharged five days after admission without complaints. Repeat chest films showed slight clearing of the previously noted infiltration.

CASE V—W.S.M.

This 51 year old male was exposed to mercury for three hours. During part of the exposure, warm mercury dripped on his arm and clothing. Toward the end of time of exposure he noticed soreness in chest, heavy breathing and a gagging sensation when he coughed. Later that evening he noted weakness in his legs with migratory pain in both legs. Four hours after the exposure, he developed chills and fever to 100° F. The following evening he was seen by a physician and complained of general malaise, fever, headache and productive cough with foamy sputum. He remained in bed at home for two days and was treated with penicillin. Symptoms gradually subsided and he was brought into the hospital for evaluation on the fourth day after the exposure. There is a history of a similar episode 30 years previously with a similar exposure to mercury.

Examination on admission showed a moderately obese male who was slightly dyspneic. Buccal mucosa was diffusely red and had a milky sheen. Temperature was 100° F., pulse 110, BP 130/70. Examination of chest revealed some diminution of breath sounds, but no definite rales were heard. Remainder of examination was negative. Laboratory data showed hematocrit 47, WBC 9,300 with normal differential. Urine was negative. Cold agglutinins were negative. X-ray of chest at time of his admission showed a diffuse interstitial peribronchial thickening consistent with edema, pneumonitis or fibrosis. He was treated with Bal and penicillin, showed progressive improvement. An X-ray on day before discharge showed a slight decrease in the prominence of the lung markings. He left the hospital five days after admission.

Analyses of blood, saliva, urine and feces from these individuals is presented in Table I.

TABLE I
ANALYSIS FOR MERCURY

PATIENT	BLOOD MG/100 CC.	SALIA	FECES MG/100 GM	URINE I MG/LITER	URINE II MG/LITER
E.W.P.	neg.	neg.	neg.	neg.	0.01
J.S.W.	0.008	neg.	0.13	0.07	0.01
W.S.M.	neg.	neg.	0.02	0.10	0.09
N.W.Y.	0.004	neg.	0.02	0.12	0.03

DISCUSSION

The history of exposure to mercury along with the similarity of the clinical picture in these five cases suggests that the pulmonary disease was produced by mercury vapor. The postmortem findings in the single fatality revealed an interstitial pneumonitis with hyaline membrane similar to those described in the cases reported by Campbell[1] and Matthes, Kirschner, Yow and Brennan.[2] The anatomical findings are similar to those seen in pneumonitis due to a variety of viral agents. In the present case, cultures for ordinary bacterial agents, as well as for viruses, were negative. It is of interest to report another patient seen in this hospital 20 years ago who died with pulmonary findings of interstitial pneumonitis (Figure 5 and 6). He had worked in the same boiler room and had been exposed to mercury vapor under similar circumstances just prior to the onset of his illness which lead to his death. This would appear to be another instance of pneumonitis produced by inhalation of mercury vapor.

The interstitial changes and especially the striking alveolar lining and bronchiolar lining proliferation which was present in both of these cases resembles in many ways the findings seen in acute interstitial fibrosis of Hammon and Rich. It is suggested that metallic vapor such as mercury when inhaled in high concentration may be another of the agents that may stimulate pulmonary interstitial fibrosis of this type.

A limited effort was made to reproduce the pulmonary lesion in guinea pigs by exposing them to high concentration of mercury vapor. They developed a marked pulmonary edema and hemorrhage with death occurring in most instances within 36-72 hours. No hyaline membranes or bronchiolar epithelial proliferation as seen in human cases were produced. However, it was clearly demonstrated that marked pulmonary disease developed from the exposure to metallic mercury vapor in all animals studied.

The concentration of mercury vapor in the air at various temperatures is well established. According to Elkins,[3] at 25° C. the concentration is 19 mg/cubic meter, and at 50° C. 111 mg/cubic meter. The level that results in pulmonary disease must be high since the cases in which these lesions have been described have all been associated with heated mercury. No measurements of the level of mercury vapor in the boiler room was made until five days after the accident. At this time some areas around the boiler still had mercury vapor levels four to eight times higher than the threshold limit value of 0.1 milligram per cubic meter which is considered a safe level.

The mercury content of tissues from Case I was high but was in a similar range to those reported by Matthes and his associates. It is noteworthy that the liver and kidneys showed no evidence of significant anatomical change in spite of the high levels of mercury found on chemical analysis.

SUMMARY

Five cases of pneumonitis associated with the inhalation of mercury vapor with one fatality are reported.

All had a sudden onset of symptoms within four hours of the beginning of exposure. The anatomical findings in the one fatality showed a diffuse interstitial pneumonitis without evidence of damage in the liver and kidneys, in spite of the high mercury content found in these organs.

ACKNOWLEDGEMENT

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Editorials

Public Imagery

Those who bothered to take note of the proceedings at the recent White House Conference on Aging will realize that, once again, an important public service forum has been converted into a political sounding board by those who insist that medical care of the aged shall be financed through Social Security. It remains to be seen whether much was actually accomplished by the Conference in terms of improving the health and welfare of our older population because the concerted efforts of certain pressure groups caused primary emphasis to be placed on this single aspect of eldercare.

Much of the potential of the American Medical Association to advise on the problems peculiar to aging was wasted, since a great deal of its participation in the Conference had to be directed toward reaffirming its support of the Kerr-Mills Bill and its continued opposition to the Social Security approach. Unfortunately, through contrivance or otherwise, the general reporting on the meeting stressed what is *opposed* by the medical profession rather than what it *supports.*

During the past year, many who were close to the preparations being made for the White House Conference recognized at an early date that, whatever the "facts" might show the medical situation of the aged in Connecticut to be, it was practically a foregone conclusion that the State's official report to the Conference would recommend a Forand-type measure—and it did. Reliable information suggests that this method of arriving at predetermined conclusions was followed in many other parts of the country, permitting those responsible for preparing the reports to disregard majority thinking in this controversial matter and substitute their own personal views for submission to the Conference. As a consequence, another situation was developed in which the recommendations of organized medicine could be reflected in an unfavorable light, largely because they are at odds with the "official" findings of a variety of non-medical experts in the welfare field.

It is becoming increasingly evident that the Madison Avenue approach to selling things and ideas, through the creation or destruction of public images, has been taken over lock, stock and barrel by the proponents of the welfare state and this sales device is particularly obvious in all matters relating to medical care. By now, it must be apparent to thinking physicians who read today's newspapers and magazines that their image is purposefully being distorted in the public eye in order to sell Social Security medical care, for the aged now and for everyone else later on.

This nation-wide disparagement of the doctor is being carried out on a vast scale and with complete dedication. Within the past eighteen months, "crises" have been conveniently unearthed in practically every facet of medicine—among the aged, in medical education, in resident training, in physician-population ratios and in voluntary hospitals, to mention but a few. In each instance of "crisis," the doctor and his professional organizations are being pictured as reactionary, opulent, selfish, callous enemies of the people, who blindly oppose every measure through which labor unionists, political opportunists and other advocates of freedom-through-dependency-on-government plan to "do good" to us.

Working to create the illusion that in health matters, Americans "never had it so bad," the welfarists have set up an intricate network of communications to develop their premises and create false alarm among the people. "Millions of Americans are complaining bitterly about the kind of medical care they are getting!", they cry, and a confused public is thereby encouraged to blindly push the panic button and turn to Washington, D. C. for help. Through this network, one feature writer tells "what's wrong with our hospitals," a second reports that "doctors are profiting at the expense of the sick," and a third concludes that "it's cheaper to die." Each quotes the others as the source of his "facts" and all make frequent references to the sayings of "eminent doctors" who, in truth, are not doctors of medicine at all but hold degrees in philosophy, sociology, economics and the like.

Thus, through the repetition of misleading statements, an atmosphere of doubt and suspicion is being created in the public mind for the sole purpose of making it more receptive to schemes for government-controlled medicine and to suggestions that the doctors of America are letting the people down. Occasionally the plot backfires, as was the case last October when candidate Kennedy was pleading for "the millions of our aged people who are not receiving adequate medical care because of inability to pay for it" and found, to his embarrassment (We hope!), that the "horrible example" he was interviewing for campaign purposes had sufficient voluntary health insurance protection to pay all but a few dollars of his medical costs for a broken hip. We may wonder if, on that occasion, the Senator was not the victim of very bad advice—advice of the sort he may well receive, as President, from such advocates of total government medicine as *Doctor* Wilbur J. Cohen, (Ph.D.) and *Doctor* I. S. Falk, (Ph.D.) who, we learn, are likely to have his ear on health matters. Would it be presumptuous for us to inquire of a considerable number of our public servants why they find it necessary to turn so consistently to men with this background for direction in their medical legislative thinking, meanwhile claiming to share the abhorrence of physicians toward a socialized form of medical care?

Certainly no claim can be made that our system of medicine is completely perfect or that every practitioner is a paragon of virtue, yet the general good health and increased longevity of the people attest to the over-all excellence of the American medical product. Our system allows patients the freedom to choose their doctor and doctors to exercise their professional judgment, unhindered by bureaucratic regulation. We want to preserve it; others want to replace it. The problem is as simple as that.

For those who are intent on placing health services under government control, it is most difficult to paint truthfully an appealing picture of what they are selling. It is much easier, they have found, to demean the virtues of free enterprise medicine and impugn the motives of its practitioners. Many are of the opinion that this questionable means of achieving their ends is meeting with considerable success, and strongly recommend that steps be taken forthwith to improve the public image of the American doctor. One of the glaring faults of the profession, they say, has been a tendency to hide its light under a bushel, thus maintaining an unwise position of modest withdrawal from the public eye.

Unquestionably there is merit in this recommendation, but if we realize that the true picture of each physician is developed by himself, in his own office, among his own patients, in his own community, we must also recognize that favorable public relations for doctors cannot be created artifically by professional writers. The whole is the sum of all its parts and despite the carpings of numerous critics, it would seem that, on the whole, medicine's record merits acclaim rather than disparagement.

In dark moments of decision like these, one cannot help but wonder if even the Good Lord himself could have created man in *His* own image if, in the times of Genesis, there had been as many people around who insisted on changing things as there are today. Of one inevitability we can be certain. If socialized medicine is brought to the people of America by means of this national conspiracy, doctors and their patients will be left to muddle through as best they can under government regulation, while the welfarists leave them blithely behind to seek out other images to destroy and other crises to be met among the slaves they have helped to create. "Don't bother us with *your* problems!", they will call back over their shoulders, "*We're* moving on to new frontiers!"

W. R. R.

Carcinogenesis Of Bladder Tumors

Recent investigations of chemical carcinogenesis of bladder tumors enhances our understanding of malignancy. Bladder tumors in man and animals are in every way biologically and microscopically similar. In both man and animals whatever the etiology, the tumors become malignant, infiltrative, metastatic and cause death. The etiology of some bladder tumors is known while of others it is obscure. Bladder tumors can be experimentally produced in animals with chemical carcinogens. It must be admitted that the bladder mucosa is especially susceptible to the etiological agent or agents as indicated by the fact that the vesical mucosa reacts while the epithelium elsewhere in the body remains uninvolved. The carcinogen may enter the body by way of inhalation, by the mouth, skin or by injection into the subcutaneous fat and muscles. The only common factor is an extended period of time required for the development of the tumors. In man bladder tumors are found most often on the base of the bladder while the vertex of the bladder in animals is more commonly involved; thus indicating that a carcinogen in the urine which causes malignant changes produces these changes in the mucous membrane where it is longest exposed to the urine.

The carcinogenic agents may be of four groups: (1) virus, (2) infections, specific and non-specific, (3) chemical, and (4) radio-active substances. It is definitely known that papillomas in rabbits is due to the "Shope" virus; but in man virus has not been isolated. The filterable virus of Rous causes fowl sarcoma; a virus has been found in skin warts, Bittner found virus as a cause for breast cancer in mice, and Lucki is accredited for finding a virus as a cause for malignant hypernephroma in the treefrog. The specific infection of Bilharzia causes cancer of the bladder in man. The pyogenic and non specific infections are only theoretically regarded as tumor producers by their long standing irritation. Leukoplakia is definitely a precancerous lesion in the bladder as well as in the oral cavity (Patch and Rhea).

Chemical carcinogens which now have the spot light for investigators endeavoring to produce bladder cancer have been known since 1700 to cause skin malignancy as demonstrated in scrotal cancer of "chimney-sweeps" due to hydrocarbons in the soot. Since then over the past 200 years cancers have been reported in copper ore-workers, workers in industries making tar and paraffin, in oils—from inhalation of cobalt and arsenic dust, chromate, nickel, asbestos and especially Anilin dye—and most recently the steroids have been included. The fourth and last group of carcinogenic agents belongs to the x-ray arradiation exposures and radioactive substances and uranium.

Within the past 25 years investigations have focused upon the chemical carcinogens producing bladder tumors. Hueper, Ferguson and Gehrmann have also studied the bladders in anilin dye workers and found that bladder tumors occurred 33 times as often as they occurred in the general population. Evans in 1936 found in the urines of dye workers Benzidrine and alpha and bata-naphthylamine. Dye workers who developed bladder tumors were in the fifth and sixth decades and had been exposed from 12 to 20 years. Investigators in Britain and the United States were convinced that bata-naphthylamine was a definite bladder carcinogen. Bonser in 1943 produced bladder tumors in dogs by oral feeding of purified bata-naphthylamine. Horning in 1946 was the first to produce transplantable prostatic cancer by giving this chemical to mice of "Strong A" type. Hughes in 1949 used 20-methylcholanthrene in a segregated bladder pouch in inbred strains of mice. Coplan with para-amino-biphenye and para-nitrobiphenye successfully produced bladder tumors in dogs. Melick found para-amino biphenyl carcinogenic for the human bladder.

Whether the carcinogens act independently or by a co-relationship with a factor or factors is at present unknown. We do not know what causes a normal cell to become a cancer cell growing independently of the normal growth factors. We might ask if the carcinogen causes the normal cell to lose its control of growth by a change in its cellular content. Is there a change in the respiratory physiology of the cell and do the nuclear and chromosome substances affect the mitotic changes and alterations in the cell activity?

Japanese workers have found that the carcinogenic action of dimethylaminobenzene was greatly influenced by diet—especially protein. Rhoads was of the same opinion and maintained that tumor formation in rats on unsupplemented diet resulted in an inhibitory action of the carcinogen or two enzymes co-carboxylase and cozymese. Boyland and Wiegart demonstrated that carcinogenic hydrocarbon may first combine with an enzyme forming a carcinogenic-enzyme complex.

Many investigators are on the verge of finding the carcinogenic agent for bladder tumors in man. Since the changing of a normal cell into a cancer cell is complex, we may expect to find the answer in several fields such as cellular biology, physics, chemistry, bacteriology, physiology, genetics and endocrinology.

C. L. D.

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A Reasonable Attitude Toward The Use Of Diagnostic Radiographic Procedures

During the past several years, a series of panicky alarms have been sounded in the lay and scientific press about the dangers of diagnostic radiography. This publicity, largely engendered by the National Academy of Sciences Report in 1956, has produced unwarranted fear and confusion. As a result, patients have refused beneficial and, in some instances, vitally necessary x-ray examinations. The purpose of this note is to summarize the available facts so that physicians can advise their patients wisely.

The problem may be divided into two broad categories (1) the somatic effects upon the individual and (2) the genetic effects upon the race.

1. Somatic effects—Our knowledge of the late somatic effects of radiation is painfully incomplete since it is largely based upon *total body* radiation. We do not even know whether or not there is a threshold for irreparable radiation damage to somatic cells. However, various data about total body radiation are available. From experience at Hiroshima and Nagasaki, we know that half of the population exposed to *total body* radiation of 400-600 roentgens will die. Moreover, there seems to be a relationship between chronic exposure to smaller doses of *total body* radiation and an increased incidence of leukemia. Also, *total body* radiation in experimental animals results in a shortening of life. However, no such effect has been produced by *local radiation of a part of the body*. In addition, no harmful somatic effects have been recognized in patients undergoing diagnostic x-ray procedures where the radiation dosage has been kept below the recommended dose level.

2. Genetic effects—Radiation of the gonads produces alterations in the genes which are reflected in an increased mutation rate. Geneticists tell us that mutations are, for the most part, undesirable. Since each species is considered to have an optimal mutation rate, they fear that a marked increase in the mutation rate will result in decreased fitness of the species. The genetic effect of radiation has no apparent threshold i.e. the smallest dose of ionizing radiation has an irreparable, harmful influence upon the genes. However, the present data do not permit any quantitative correlation between the human gonadal radiation dose and the degree of genetic damage. One thing can be said in this regard. In well operated x-ray departments, the gonadal dose from diagnostic radiographic procedures does not exceed the dose all of us are constantly exposed to from cosmic and earth radiations.

These are the facts. How can we apply them in the best interest of the patient? I would suggest the following guides:

1. The physician requesting any diagnostic x-ray examination should expect the radiologist to utilize all possible technical means to reduce the radiation dosage to the patient i.e. well filtered beams, high voltage, cones, the smallest fields consistent with adequate examination, gonadal shielding, fast films and screens wherever feasible.

2. All routine x-ray examinations not absolutely essential to establish a correct diagnosis should be avoided, especially in children, pregnant women, and men and women below 40 years of age. The final decision to request such an examination should be dictated by careful medical judgement of the health needs of the patient.

3. Since pelvimetry has been estimated to contribute as much as 20 per cent of the genetically significant radiation to the mother and child, it should be ordered only if deemed obstetrically necessary. Then, it should be done late in pregnancy after the vital period of fetal organogenesis, at which time cephalopelvic disproportion can be satisfactorily evaluated.

4. Fluoroscopy should never be performed as a routine procedure. When fluoroscopy is necessary, the fluoroscopist should be well dark-adapted (15-20 minutes). Whenever possible, image amplification should be employed.

5. Photofluorographic chest examinations should not be carried out in children in Connecticut because of the low diagnostic yield. In adults over 40 years of age, the potential damage to the patient is far outweighed by the benefits from the early diagnosis of tumors, tuberculosis, heart disease and other chest lesions.

Diagnostic roentgenology has played an important role in helping modern medicine to improve health and extend life expectancy. It is safe to predict that the judicious use of diagnostic x-ray examinations will continue to offer even greater benefits in the future. It is up to the physician to employ his wisdom and traditional good sense in ordering diagnostic x-ray studies for his patients.

R. S.

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Reaching The Students In Law And Medicine

Only in the past three years have the medical and legal professions concentrated their efforts toward solving the paradoxical feud between lawyer and doctor. And, in spite of concurrent rises in malpractice claims and judgements, areas of mutual understanding and respect have been recognized, explored and—to a growing extent—accepted by many practitioners in both fields.

In state after state, attorneys and physicians, along with their bar and medical associations, have adopted interprofessional codes of ethics. Leading physicians have addressed bar groups. Expert trial lawyers have spoken before medical societies and hospital associations. Joint seminars have attracted wide interest and discussion.

Yet, glares of common distrust continue to generate discord with many a new confrontation of doctor and lawyer on opposite sides of a claim fence. These animosities, at heart, can be explained away neither in clinical nor legalistic terms. They are emotional, and like so many things emotional, they have their origins in ignorance, misunderstanding and prejudice.

What better way to combat this "communicability of distrust" than at the initial point of professional learning, the schools and workshops of law and medicine? This one step beyond the joint bar-medical association session, this direct reaching into minds conditioned for learning basic technique and principle, may well prevent an irresponsible court action on the one hand and a reckless medical procedure on the other. It might be accomplished in an occasional undergraduate presentation—by a knowledgeable and experienced attorney or judge to medical students, and by an equally qualified physician to law students—followed, perhaps, by pertinent courtroom exposure during medical internship and corresponding introduction of law apprentices into the actual medical scene.

There is every promise that such meshing of the two disciplines on a judiciously limited scale will be of mutual benefit. Coordinated developments in religion and medicine, which also have been at odds in past decades, provide evidence that it can be done. In scores of hospitals, seminary students today receive pastoral training in actual contact with the sick and dying—and thereby become better clergymen. A number of medical schools, notably in Texas, are proving through joint curriculum planning that a fledgling physician's acquaintanceship with situations encountered in religion tend to make him a better doctor—no matter what faith, if any, he may profess. The University of Chicago in 1957 set world precedent when it established a joint chair of religion and health to serve both its medical school and federated theological school.

Similar interdisciplinary efforts cry for adaptation in medical and legal education. All that remains is enlightened leadership to recognize the need in its essence and to set the pace of method so that basic education in law and medicine are retained.

There is time enough for misgivings when an ethical physician finds a colleague's name on a justifiable malpractice claim, and when an ethical attorney must bear the disgust of watching an ambulance-chaser badger a medical witness. There is too little time for these dedicated practitioners to help open a common avenue of communication early in the respective careers of their successors.

* Golin, M., "My Life, Near Death, Near God," J.A.M.A., Medicine At Work, April 13, 1957.

Reprinted with permission from the editorial page of the June, 1960 issue of Medicolegal Digest.

Antibody Mechanism May Be Cause of Diseases

The theory that the antibody-producing mechanism in man can cause diseases is gaining support and may be the key to a better understanding of rheumatoid arthritis and other disorders, the Journal of the American Medical Association said.

The autoimmune process, man's natural resistance to disease, consists of the ability to produce antibodies to fight off the infection.

An editorial in the current Journal cites accumulating evidence that abnormal antibody-producing cells can cause Red Wolf Disease, technically known as systemic lupus erythematosus (SLE).

The evidence "seems convincing" and may mark "the beginning of a new era" in defining the causes of other diseases, such as rheumatoid arthritis, Addison's disease, and chronic pancreatitis, the Journal commented.

The Journal referred to an editorial on Red Wolf Disease by Dr. William Dameshek, professor of medicine, Tufts University School of Medicine, Boston, in the current Archives of Internal Medicine, published by the AMA.

Dr. Dameshek said, "We believe there is sufficient evidence at hand to call SLE a complex autoimmune disorder with irregular involvement of various constituents of the blood and small blood vessels, thus resulting in a highly protean [changeable] disorder.

"Involvement at the beginning may be limited to one tissue, one organ, or one blood cell constituent, with progressively greater involvement as time goes on. Finally, there is a widespread generalized disease with death ordinarily due to severe renal [kidney] disease."

Dr. Dameshek said the reasons for groups of abnormal antibody-producing cells to develop are "obscure."

Red Wolf Disease is a chronic disorder, more common among women than men. It is not rare and can cause death. The symptoms include fever, arthritis, joint pain, and skin rash.

THE PRESIDENT'S PAGE

In our country during the past two generations the application of rapidly growing preventive, constructive and curative medical knowledge not only has contributed to a nearly 50 per cent increase in average life expectancy but also has greatly aided in making the added years more healthy, productive and comfortable. Medical care has become more scientific, more complex and more expensive; but the public's increased investment in health care has probably paid more satisfying dividends than any other investment the public has made.

The individual patient knows that his personal physician is dedicated to the acquisition and application of the most up-to-date medical knowledge. The individual patient takes for granted the intimate patient-physician relationship in which the patient does not hesitate to disclose confidential details of his life, including his business and social life, knowing that these may have a bearing on his ills and anxieties and confidently trusting that the physician will respect his patient's individuality, privileges and dignity in utilizing such information to best advantage in the patient's hour of need.

The individual patient also properly takes for granted the fact that the payment of a physician's fee should never influence the effort made or the quality of care rendered by the physician. Traditionally, the patient's payment to a physician has been a token of the individual patient's appreciation of the individual physician's care. It is understandable, therefore, that the physician's fee traditionally has been largely determined, not by the care rendered, but by the patient's financial resources from which the patient could withdraw his pecuniary expression of appreciation.

As the application of new medical knowledge has called for increasing outlays for more complex and more expensive medical procedures (a situation made worse by general inflation) the public has turned more and more to insurance methods to meet the costs of medical care. When medical societies have instituted plans whereby individuals of modest income could make regular contributions which would insure their receiving specified surgical and medical services without additional payment to the physicians providing the services, the public has rushed to join such plans.

Some physicians have strongly resisted the "collectivism" of plans which involve providing specified services at prearranged fees. Most physicians, however, acknowledge that there is an increasing public need for this type of coverage. They understand that such plans cannot provide the wide range of variability in fees theoretically possible in direct payments by individual patients; but they recognize that a system of scaled regular contributions to plans providing different levels of fees in behalf of patients with different levels of income does bear a resemblance to the traditional determination of fees on the basis of the financial resources of patients.

The resemblance would be lost, however, if physicians were not consulted about the establishment of such fee schedules, about the policies governing the payment of the established fees, about modifications to be made (particularly in complicated situations) and about the adjudication of problems arising under the plans. On the other hand, if physicians are certain that they will be consulted about such matters and that physician-patient relationships can be maintained on a personal and confidential basis, physicians can be counted upon to demonstrate their willingness to adapt to newer economic patterns.

John N. Gallivan, M.D.

FROM THE GENERAL MANAGER'S OFFICE

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COUNCIL MEETING

Thursday, December 15, 1960

A meeting of the Council was called to order by the Chairman, Dr. Gilman at 2:30 P.M. on Thursday, December 15, 1960. Present in addition to the Chairman were Drs. Gallivan, Feeney, Goldberg, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Katzin, Buckley, Rentsch, Murray, Jr., Gorman, Ogden, Grant, Davis, Phillips, Chartier. Also present Dr. William R. Richards and Mr. James Burch, Director of Public Relations. Absent were Drs. Schiavetti, Gevalt, Purnell.

The printed minutes of the meeting of November 16, 1960, were approved.

It was VOTED to exempt Robert D. Hurwitz, New Haven County, from payment of dues during his period of postgraduate education.

It was VOTED to exempt Joseph C. Carpentieri, New Haven County, from payment of dues during his period of postgraduate education.

It was VOTED to defer action on the exemption from dues of Franklin M. Goodchild, Windham County, pending further communication from the Windham County Medical Association.

It was VOTED to refer the matter of dues exemptions, for all reasons, to the Subcommittee to Study and Revise the Bylaws.

It was VOTED to authorize the payment of membership dues for 1961 to the Greater New Haven Chamber of Commerce.

It was VOTED to appoint Phillip J. Moorad, New Britain, to serve on the Committee on Industrial Health.

It was VOTED to accept, with regret, the resignation of Vincent J. Vinci, Middletown, from the Committe on National Legislation. It was further VOTED to request Clifford W. Mills, Chairman, to recommend to the Council a member of the Middlesex County Medical Association to replace Dr. Vinci on this Committee.

It was VOTED to authorize payment of Christmas bonuses to the office staff.

CONNECTICUT MEDICAL SERVICE, INC. The Council was notified by letter, dated December 2, 1960, that the terms of office of four named physician members of the CMS Board of Directors will expire at the Annual Meeting of the Corporation on February 21, 1961 and, "in accordance with the provisions of the (CMS) Bylaws, Article I, Section 1" was requested to nominate "four Participating Physicians, each for terms of office of two years."

Nominations for each directorship were voted on separately, and voting was carried out by secret, written ballot. At the conclusion of ballotting, the Chairman announced that the nominations of the following four members of the Society, all Participating Physicians, were to be recommended by the Council to the Corporators of Connecticut Medical Service, Inc. for election to membership on the CMS Board of Directors at the Annual Meeting of the CMS Corporation to be held on February 21, 1961.

Israel E. Blodinger, New Haven
Cleveland R. Denton, Hartford
Frank H. D'Andrea, Stamford
William J. Murray, Jr., New London

All nominations for each directorship and the official reports of the tellers on the voting for each nominee are on file at the Society's office, and may be examined by any interested member of the Society.

The Council was informed that William H. Horton, M.D., Executive Director of CMS, Inc., sought guidance as to the form in which the provisions and payment schedules of the proposed new Community Contract should be submitted to members of the Society for study and review prior to their being called upon to indicate their individual approval or disapproval of the terms; i.e., should the contract be distributed in legal form or in descriptive form.

After considerable discussion, it was VOTED: That when the CMS Community Contract is distributed to members of the Connecticut State Medical Society in general, it be submitted to each member in complete detail and final legal form, together with whatever explanatory materials the CMS Board of Directors and the Council of the Connecticut State Medical Society may desire to include.

Consideration of this matter led into a further discussion as to the form in which the Council should receive the proposed new contract. Dr. Gilman announced that descriptive copies of the Community Contract had just been received at the Society's office and would be distributed to all members of the Council for study prior to the next meeting which would be devoted rather exclusively to a review of its terms, coverages and professional payment schedules. He pointed out that the contract had been submitted in this descriptive form at the suggestion of the Liaison Committee. The question was raised as to how the Council could, if provided only with descriptive material, initiate appropriate action according to the "Method" adopted at the April 28, 1959 meeting of the House of Delegates, which in its first paragraph, calls for receipt by the Council of proposed major changes in existing contracts or proposed new contracts "in complete detail and in final form." There seemed to be general agreement that unless the new contract were received in legal form (mimeographed or printed), the Council could not technically determine that it actually was in complete detail and in final form, and could therefore not properly recommend that the subsequent steps outlined in the "Method" be taken.

It was therefore VOTED: That the Council request that CMS, Inc. provide all members of the Council with copies of *both* legal and descriptive forms of the proposed new Community Contract for their consideration.

As an integral part of the deliberations just described, a question arose as to when the Insurance Commissioner would review the proposed new contract and render an opinion, as to its acceptability from the standpoint of his office. While some members of the Council expressed the opinion that, legally, a decision in this matter was entirely up to the Insurance Commissioner and the CMS Board of Directors, others directed attention to the (Gens) resolution adopted by the House of Delegates on April 29, 1958, which reads, in part: "Be It Further Resolved: That . . . proposed changes in (CMS) contracts or proposed new contracts, submitted in complete detail and in final form, must be approved at a meeting of each and every component county (medical) association before submission to the State Insurance Commissioner for his approval." For purposes of discussion, the Chairman was asked to rule as follows and did so: That the "Method" to be followed in the consideration of a proposed new CMS contract by the Connecticut State Medical Society, adopted on April 28, 1959, by the House of Delegates, supersedes the so-called "Gens Resolution", adopted by the House on April 29, 1958, and does not require the CMS Board of Directors to await final action by the Society prior to submitting a proposed new contract to the Insurance Commissioner.

This ruling of the Chair was challenged and, following extensive debate, a roll call vote was requested. The Council members VOTED as follows:

In support of the ruling of the Chair: Gallivan, Feeney, Goldberg, O'Connor, Gardner, Weise, Cornwell, Katzin, Buckley, Rentsch, Murray, Gilman, Ogden, Grant, Phillips and Chartier. Total—16.

Against the ruling of the Chair: Hess, Caplan, Cullen, Scully, Abbot, Bradley, Gorman, and Davis. Total—8.

The ruling of the Chair in this matter was therefore upheld.

After considering a resolution from the Joint Conference Committee with the Connecticut Pharmaceutical Association which expressed opposition to certain aspects of the drug sample collection program known as "Operation Jaycee Doctor," it was VOTED to reaffirm the previously established attitude of support for this project. "Operation Jaycee Doctor" is being conducted jointly by the Connecticut Junior Chambers of Commerce and the Woman's Auxiliary to the Connecticut State Medical Society.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to refer to the Subcommittee to Study and Revise the Bylaws, a recommendation from the Committee on Public Health which suggests that consideration be given to a grouping of a number of committees of the Society which are related to public health; also the modification of certain committee functions.

COMMITTEE TO STUDY PERINATAL MORTALITY AND MORBIDITY. It was VOTED to refer to the Committee on State Legislation a recommendation from the Committee to Study Perinatal Mortality and Morbidity which pertains to the "privileged communications" status of that committee. It was further VOTED to request the Committee on State Legislation to study the legal aspects of "privileged communications" as it applies to all aspects of medical practice and to prepare one or more suitable bills in this regard for introduction at the next session of the Connecticut General Assembly, if possible.

ELECTION OF STUDENT MEMBERS. It was VOTED to elect the following to student membership.

Raymond L. Casella, 1203 North Street, Suffield, New York Medical College—Class of 1962; Pre-Med.—Tufts University & Univ. Mass. Grad. Sch.; Parent—Carl Casella.

David N. Cohen, 1954 Albany Avenue, West Hartford, Cornell Univ. Medical School—Class of 1964; Pre-Med.—Yale University; Parent—Simon S. Cohen.

James D. Flynn, 247 Tesiny Avenue, Bridgeport, Georgetown Univ. School of Medicine—Class of 1964; Pre-Med.—Fairfield University; Parent—James H. Flynn.

Francis J. King, Jr., 14 Howes Avenue, Stamford, University of Virginia—Class of 1964; Pre-Med.—Harvard College; Parent—Francis J. King.

Gilles A. Marchand, Shea's Lane, Taftville, Jefferson Medical College—Class of 1964; Pre-Med.—University of Connecticut; Parent—Donat Marchand.

James M. Miller, 451 Russell Avenue, Suffield, Cornell University Medical College—Class of 1964; Pre-Med.—Hamilton College, Parent—John H. Miller.

David F. Mintell, 7 Southeast Street, Milford, Jefferson Medical College—Class of 1964; Pre-Med. —University of Bridgeport; Parent—Fred A. Mintell.

It was VOTED to approve the holding of the 1961 Clinical Congress in New Haven and to approve the proposed registration fee of $5.

It was VOTED to adopt two recommendations of the Committee on Hospitals, the text of which follows:

1) It was VOTED to recommend that the Connecticut Hospital Association Board of Trustees and the Connecticut State Medical Society Council inform each general hospital, together with its organized medical staff, of their joint obligation and responsibility to work toward optimum utilization of the hospital in order to guarantee the quality performance which the community served demands.
2) It was VOTED to recommend that the Connecticut Hospital Association Board of Trustees and the Connecticut State Medical Society Council urge each member general hospital to join with its organized medical staff in a formal examination of its emergency service function.

It was VOTED to refer to the governing body of each of the eight county medical associations, for study and subsequent report to the Council, the following recommendation of the Society's Committe on Third Party Payments.

"Since third party payment agencies are an important factor on the economic side of the practice of medicine, this Committee feels that any apparently excessive physician's fee may be reviewed.

The Committee on Third Party Payments feels that alleged abuses are best considered on a County level by existing County Grievance Committees. If a point of disagreement still exists this Committee feels that a competent committee at State level should be appointed to review the matter."

Dr. Feeney reported on his participation as a member of the Governor's Commission to draft legislative proposals which would implement the Kerr-Mills Bill in Connecticut. He described plans under consideration in other states and gave a broad outline of the current thinking within the Commission. He asked for direction from the Council as to what recommendations he might make which would be supported by the Council and would be likely to meet with the approval of the Society's general membership. It was suggested that prior to the next meeting of the Commission on December 28th, he meet with the physician members of his committee on this subject and this he agreed to do.

The Council received as information a letter of congratulation to Governor Ribicoff on his appointment as Secretary of Health, Education and Welfare in the new federal administration. The letter was written to him on behalf of the Society by John N. Gallivan, President. The Governor's reply reads as follows:

"Dear Dr. Gallivan:

My warm thanks for your message of congratulations. I appreciate your confidence and your offer of cooperation.

While I leave Connecticut with regret, I do look forward to working with the President-elect in his constructive program for our nation.

With best personal regards, I am

Sincerely,
S/ Abe Ribicoff
Governor"

The Council was informed of the current ruling of the Attorney General of the State of Connecticut on the question of whether podiatrists are legally authorized to prescribe systemic medications. A pertinent excerpt from Attorney General Coles' December 1st letter to Commissioner Frasinelli of the Department of Consumer Protection reads as follows:

"Our opinion of May 26, 1960, was to the effect that chiropodists are not allowed to prescribe or administer internally any narcotics or antibiotics because that was the specific question prepounded to us. However, it is obvious from the contents of the opinion that chiropodists cannot legally prescribe any medical preparation which would be absorbed by the body and thereby enter the blood stream."

The Council was informed that the administration of the Council of New England State Medical Societies was moving ahead with plans to have the N. E. Council take over the operation of the New England Postgraduate Assembly. It was noted that, up to now, the Connecticut State Medical Society has not been officially asked whether it wishes to participate in this project or not. Our three delegates to the N. E. Council have been instructed *not* to vote on this matter until they have received direction from the Council or the House of Delegates.

It was VOTED that the General Manager communicate with the Connecticut Compensation Commission regarding the action the Commission has taken or will take with respect to the November 29th recommendations of the Section on Radiology that portions of its 1959 fee schedule agreement with the Commission be rescinded. It was further VOTED to approve for this purpose a letter drafted and read by the General Manager.

It was VOTED to appoint Joseph R. Bove, 789 Howard Avenue, New Haven, to membership on the Committee on State Blood Bank to replace Donald W. King, 310 Cedar Street, New Haven, who wishes to resign, according to the Chairman of the Committee. It was VOTED to accept Dr. King's resignation, pending confirmation of his desire to resign.

Two motions were introduced on behalf of E. Tremain Bradley, Councilor from Fairfield County Medical Association.

The first of these has to do with a resolution adopted by the Norwalk Medical Society which calls upon the Council to "review promptly the number of approved internships with a view to equalizing the supply and demand," and upon the AMA "to adjust the so-called Matching Plan accordingly." The resolution was received for consideration at the next Council meeting.

The second motion calls for "verbatim" recording of the Council's proceedings and certain related matters. It was VOTED to table action on this motion at this meeting and to place it on the agenda of the next meeting.

It was VOTED that the Chairman and the General Manager set the date for the next meeting of the Council.

COUNCIL MEETING

Wednesday, January 4, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman at 2:30 P.M. on Wednesday, January 4, 1961. Present in addition to the Chairman were Drs. Gallivan, Feeney, Goldberg, Hess, O'Connor, Caplan, Gardner, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Rentsch, Murray, Jr., Schiavetti, Gorman, Ogden, Gevalt, Grant, Davis, Phillips, Chartier. Also present: CMS—Drs. Blodinger, Gallo, Horton, Polito and Ryan; CSMS—Dr. Richards, Mrs. Lindquist, Mr. Burch. Absent were Drs. Cullen, Katzin, Buckley, Purnell.

It was VOTED to approve the printed minutes of the meeting of December 15, 1960.

CONNECTICUT MEDICAL SERVICE, INC. Outline copies of the proposed new CMS Community Contract had been distributed to all members of the Council for study well in advance of the meeting. The Chairman reaffirmed the fact that the proposed contract had been given prior review by the CMS-CSMS Liaison Committee on November 22, 1960. He welcomed as guests, three CMS Directors, Drs. Blodinger, Gallo and Polito, the Chairman of the CMS Medical Advisory Committee, Dr. Ryan, and the CMS Executive Director, Dr. Horton, and invited them to participate in the review of the contract by the Council.

After various aspects of the proposed contract had been explored at some length, the following series of actions were taken:

1. It was VOTED: that for the purposes of this meeting, the descriptive material relating to the proposed CMS Community Contract, submitted to the Council by the CMS Board of Directors, be considered to be "in complete detail and in final form" (as outlined in the method for considering a new CMS contract, adopted by the CSMS House of Delegates on April 28, 1959).

2. It was VOTED unanimously by the 23 Council members present: that the Council approve the outline of the proposed CMS Community Contract as presented to it by the CMS Board of Directors.

3. It was VOTED: that the Council promptly refer the outline of the proposed CMS Community Contract to the Society's Committee on Third Party Payments and to the Councilor of each component county medical association with the recommendation that the Committee on Third Party Payments and each component county medical association act upon the proposed contract forthwith, and that the Committee on Third Party Payments and each component county medical association be simultaneously informed of the actions taken by the Council on January 4, 1961 with respect to the proposed contract.

4. It was VOTED: that the General Manager of the Society communicate with the Executive Director of CMS, Inc. at the conclusion of this meeting for the purpose of informing him of the Council's desire to have copies of the material, as received and approved by the Council at this meeting, distributed to each member of the Connecticut State Medical Society at the earliest date possible.

5. It was VOTED: that it be recommended by the Council to each component county medical association, through its Councilor, that, if possible, each association hold a special meeting as soon as practicable for the primary purpose of considering and acting upon the proposed Community Contract.

6. It was VOTED: that the addressograph facilities of the General Manager's office be offered to the CMS administration to expedite the mailing of the material relative to the proposed Community Contract to all members of the Society.

At a later point in the meeting, but under CMS business, the Chairman read a letter from Mr. Robert S. Judd, Chairman of the CMS Board of Directors. The letter was addressed to the Chairman and was dated January 4, 1961. In the communication, Mr. Judd requested that the council reconsider its recent nominations for membership on the CMS Board, and informed the Council that a committee of the Board had been directed to develop certain CMS bylaw changes with respect to terms of office for directors which would be submitted for review by the Joint Liaison Committee. Following an expression of each member of the Council on these matters, it was VOTED: That the subject of nominations by the Council of the Connecticut State Medical Society to the Board of Directors of Connecticut Medical Service, Inc. be submitted to a joint meeting of the respective Liaison Committees of CMS, Inc. and the Society for discussion forthwith. The vote on this motion was 13-5.

RESOLUTION FROM NORWALK MEDICAL SOCIET. E. Tremain Bradley, Councilor from Fairfield County, introduced a resolution from the Norwalk Medical Society which concludes as follows:

"Be it RESOLVED: That the Council of the Connecticut State Medical Society request the American Medical Association to review promptly the number of approved internships with a view to equalizing the supply and demand, and be it further

RESOLVED: That the American Medical Association be requested to adjust the so-called Matching Plan accordingly."

It was VOTED to adopt the resolution for direct transmittal to the AMA Council on Medical Education and it was further VOTED to transmit the resolution to a committee to be appointed by the President (to study a related resolution of the House of Delegates) as information and for implementation with respect to submission to the American Medical Association in proper form via the Society's House of Delegates.

At this point, Dr. Gallivan submitted for approval the names of members of the Society which he, as President, recommended to serve on the committee called for by the House of Delegates to consider and report upon the House resolution concerning hospital accreditation (December 6, 1960). It was VOTED to endorse the President's appointment of the following committee members and such additional members as the governing bodies of other county associations may recommend subsequently:

James R. Cullen, Hartford, Chairman
Henry Caplan, Meriden
Howard J. Lockward, Manchester
Gordon J. LaVelle, Middletown
Russell Pope, Bridgeport
J. Alfred Fabro, Torrington
Hilliard Spitz, New London

VERBATIM MINUTES OF COUNCIL MEETINGS. Acting on a motion introduced by E. Tremain Bradley, Councilor from Fairfield County, it was VOTED not to utilize a professional stenographer or a recording device for the purpose of keeping verbatim minutes of Council proceedings and other stated purposes.

CSMS PANEL TO REVIEW AND ASSIST IN PHYSICIAN-HOSPITAL DISAGREEMENTS. Pursuant to the December 6, 1960 action of the House of Delegates, calling for the annual appointment by the Council of a panel of 14 members from which three would be selected by the President, on request, to assist in resolving protracted physician-hospital disagreements, it was VOTED to make these interim appointments for 1960-61 as follows:

Fairfield County (3)—George R. Cody, South Norwalk; William M. Stahl, Danbury; Vincent A. Gorman, Bridgeport.

Litchfield County (1) — George A. Fowler, Sharon.

New London County (1)—George H. Gildersleeve, Norwich.

Middlesex County (1)—Charles W. Chace, Middletown.

Tolland County (1)—John F. Hughes, Somers.

Windham County (1)—Karl T. Phillips, Putnam.

New Haven County (3)—To be designated by Board of Governors.

Hartford County (3) — To be designated by Board of Directors.

RECOMMENDATIONS FROM THE COMMITTEE ON PUBLIC HEALTH. Several recommendations received from the Committee on Public Health were acted on as follows:

a. It was VOTED to recommend to the component county medical associations that a Committee on School Health be set up within each association, one of whose functions should be the organization of county-wide conferences, in the Spring of 1961 and at suitable times thereafter, to consider athletic injuries. The pattern of such conferences would be similar to the Connecticut Conference on Athletic Injuries held by the State Medical Society in Meriden on April 12, 1960. Other functions of such a committee would be to maintain liaison with school health agencies and personnel within the county on matters relating to health programs in Connecticut schools.

b. On a recommendation from the Committee that the Council reconsider its unfavorable action on a prior request for funds with which to publish a brochure on staphylococcal infections, a motion to reconsider was defeated.

c. It was VOTED to give legislative support to that portion of a proposal amendment to the Connecticut Statutes, Section 22-359—The Control of

Rabies—which reads: "Should investigation warrant the advisability of vaccination of all dogs in the area, the Commissioner shall provide such services . . . . ." which has the intent of supplementing the present authority of the Commissioner of Health to "make such orders for the adequate confinement, control or destruction of any dog or domestic animal as he deems necessary to prevent the spread of said disease (Rabies) and protect the public." The Council took no position on the question of who should pay for the required "vaccination of all dogs."

JOINT MEDICAL-DENTAL PROGRAMS. On the recommendation of John Donnelly, Chairman of the Committee on Aging, it was VOTED to co-sponsor with the Connecticut State Dental Association a pilot series of medical-dental teaching programs on problems relating to treatment of the chronically ill and aging in the State. These would be held in several places throughout the New Haven County area at the start and would be open to interested members of both professions by registration, starting on or about April 5, 1961.

STATE MEDICAL SCHOLARSHIPS. It was brought to the attention of the Council that considerable newspaper publicity had been engendered by the Connecticut Chapter of the American Academy of General Practice in announcing support of a bill which calls on the 1961 General Assembly to provide ten medical scholarships each year to qualified Connecticut residents who have graduated from college and desire to enter medical school. Recognizing that the bill should be evaluated by the Society's Committee on State Legislation, it was VOTED to refer the information to that committee with a request that a report on the proposal be returned to the Council as soon as practicable.

EXEMPTION FROM DUES. It was VOTED to permanently exempt from payment of dues, Paul S. Phelps, Hartford County.

EXEMPTION FROM DUES. It was VOTED to exempt from payment of dues for 1960 and 1961, Harold W. March, (Fairfield County).

GOVERNOR'S COMMITTEE. Dr. Feeney recounted the deliberations of the committee which Governor Ribicoff recently appointed to make recommendations relative to implementing the Kerr-Mills Bill in Connecticut, and to develop a bill for consideration by the 1961 General Assembly which would set up a Medical Assistance to the Aged (MAA) plan for this State. Incidental to Dr. Feeney's report, the Council received a list of recommended principles from the Committee To Study Implementation of the Kerr-Mills Bill in Connecticut and VOTED to endorse and promulgate these principles as follows:

1. There should be clear differentiation between the existing Old Age Assistance (OAA) program and a Medical Assistance to the Aged plan called for under PL 86-788. MAA is intended for those people over 65 who can normally provide food, clothing and housing for themselves but who may need periodic financial assistance during medical emergencies.

2. A level of primary personal and family responsibility should be set to pay for relatively minor medical expenses (aspirin, liniment, an occasional visit by a doctor, etc.) thereby avoiding "first dollar" assistance which has consistently proved to be prohibitive in cost under socialized health schemes abroad.

3. Emphasis should be on assistance of the major medical or "catastrophic" type: i.e., help in meeting the large costs most often associated with prolonged serious illness and institutional care.

4. There should be a minimum "waiting period" during which determination of eligibility to receive needed assistance is made.

5. Central and regional appeal boards to be established which would expedite the determination of eligibility for assistance and advise the Welfare Commissioner in other matters relating to operation of the plan. The Medical Society would favor all members of these appeal boards serving without remuneration.

6. Continuance of the tradition of doctors to reduce charges to patients in reduced circumstances through the development by the Medical Society of a suitable substandard or "service benefits" payment schedule to apply to MAA physician-care only. This partial subsidy of the plan by Connecticut M.D.'s would help reduce the program's cost and make each tax dollar go farther.

7. Preservation of the greatest possible degree of "free choice" by the patient to receive continuing medical care from his own, personal physician. Under the existing Old Age Assistance program, this freedom is lost at the hospital admitting office, since in-hospital treatment by a private doctor is not allowable under OAA."

ANIMAL EXPERIMENTATION BILL. A legislative bill was received concerning the treatment, sale, and purchase of laboratory animals. The bill is to be introduced at the 1961 General Assembly by the Connecticut Society for Animal Research. It was VOTED to refer this matter to the Committee on State Legislation for study and report.

DATE OF NEXT MEETING. The Chairman announced that he would set the date of the next meeting to coincide with the ability of President Jorgensen of the University of Connecticut to meet with the Council to discuss plans being made for the establishment of a second medical school in the State.

PLACEMENT WANTED

Joseph J. Lucas, Jr., M.D., age 31, M.D. University of Rome Medical College 1957—Specialty Internal Medicine. Available June 1961.

ANYONE KNOWING OF AN OPENING FOR THIS PHYSICIAN IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

PLACEMENT OPPORTUNITIES

Wanted: General practitioner in the Stafford Springs area.

For Rent: Office for physician in the New Haven area. Recently vacated by a general practitioner.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

1961 MEETINGS

March 23—Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

April 5—Medical-Dental Orientation Course For the Chronically Ill and Aging, Veterans Administration Hospital, West Haven.

April 12—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

April 19—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

April 20—Annual Medical Symposium for Stamford-Darien-New Canaan Heart Association, Inc., at St. Joseph's Hospital, Stamford.

April 25, 26, 27—Annual Meeting, Connecticut State Medical Society, Hamden High School, Hamden.

April 26—Medical-Dental Orientation Course For the Chronically Ill and Aging, Forrest Hills Guest Home, 462 Derby Ave., New Haven.

May 3—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

May 10—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

June 26-30—Annual Meeting, American Medical Association, New York City.

October 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30—Clinical Meeting, American Medical Association, Denver.

Oral Therapy Extended To Many Diabetics

A combination of two drugs can extend oral therapy to "a sizeable group" of diabetic patients, a study showed.

The two drugs, tolbutamide and phenformin, previously have been used singly. They were administered in combination to 80 patients in whom the disease could not be wholly controlled with tolbutamide alone. Significant improvement was obtained in 70 per cent without causing any serious side effects.

The study was reported by Drs. Roger H. Unger, Leonard L. Madison, and Norman W. Carter, Dallas, Texas, in the current Journal of the American Medical Association.

Diabetes is a disorder in which the body cannot utilize sugar normally, causing an excess to accumulate. Tolbutamide, taken by mouth, is the most widely used drug to reduce the level of sugar in the blood. However, in some patients the drug cannot reduce the bood sugar level to normal and in others it cannot reduce the level at all.

The 80 patients in the Dallas study were either totally or partially unresponsive to tolbutamide.

The authors attributed the success of the treatment to "the combination of drugs rather than phenformin alone."

The tolbutamide-phenformin combination "is clearly the most potent of the oral regimens" for those patients imperfectly controlled by tolbutamide alone, they said. This is "a group thought to make up a considerable proportion" of those with the adult form of diabetes, they added.

Oral therapy can, therefore, be extended to include a sizeable group of previously ineligible patients," they said.

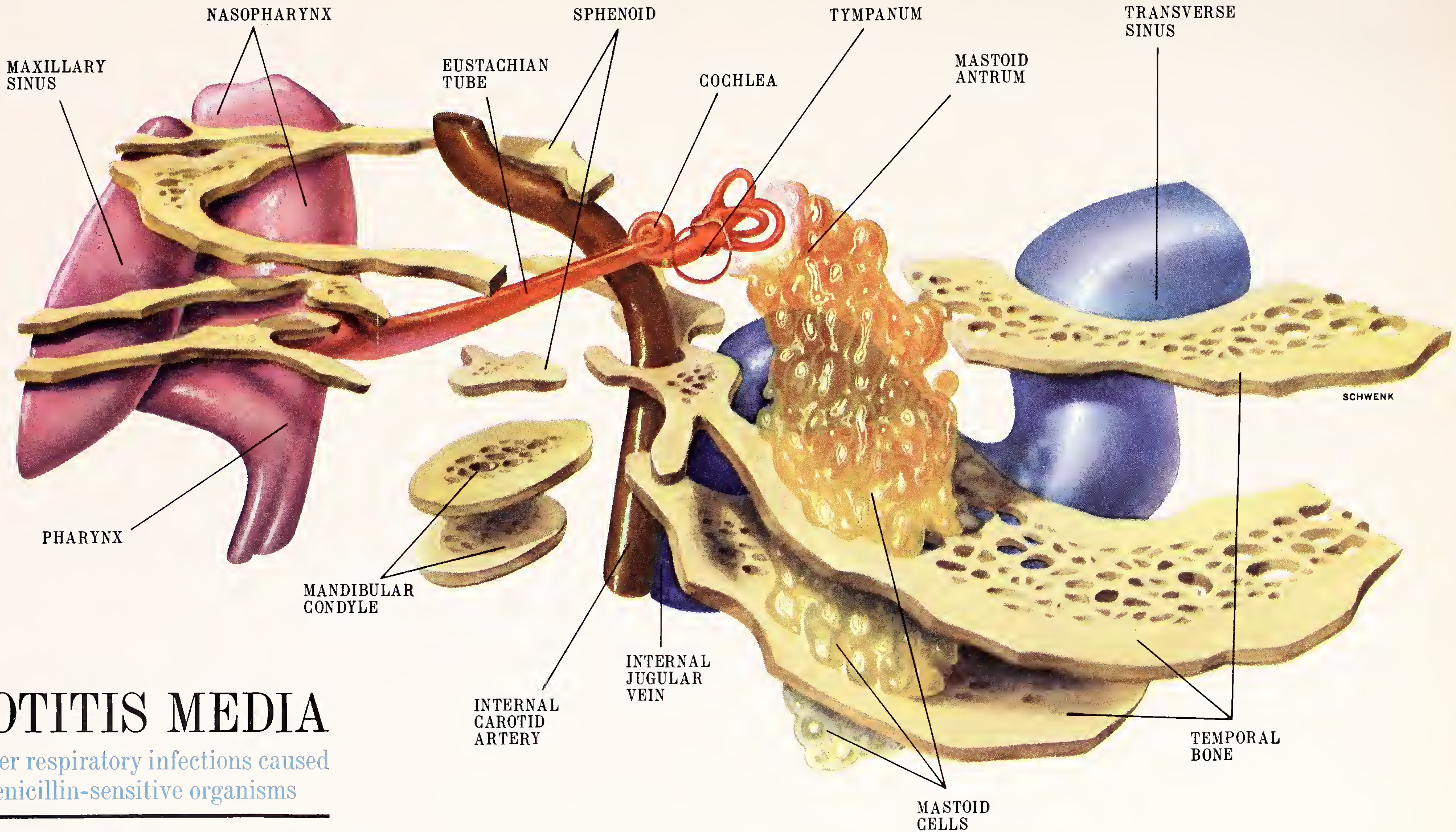
Regarding side reactions, the authors said, this therapy has not been associated with evidence of liver, kidney, nervous, or skin disorders. They reported some gastrointestinal side effects which were unpleasant but not of a serious nature.

"Tolbutamide is the drug of choice in tolbutamide-responsive diabetes; tolbutamide-phenformin combination therapy appears to be an effective and relatively safe method of treating tolbutamide-hyporesponsive and unresponsive [adult] . . . diabetes," they concluded.

Dr. Samuel B. Beaser, Boston, who made the first report in this country in 1958 on the combination therapy, reported on a similar study in the same Journal.

His study showed that a combination of phenformin and either tolbutamide or chlorpropamide, which is similar to tolbultamide, was successful in reducing blood sugar in 19 of 25 diabetics. These patients had failed to respond fully to treatment with either tolbutamide or chlorpropamide alone.

(TEAR ALONG DOTTED LINE)



This diagram represents the lateral aspect of the left middle ear and related structures. The bony landmarks are shown in serial sections.

IN OTITIS MEDIA

and upper respiratory infections caused by penicillin-sensitive organisms

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for your next case in which penicillin is indicated . . .

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(phenoxyethyl penicillin potassium)

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Effective in vitro antibacterial activity against penicillin-sensitive organisms*

	mcg./ml.
Bacillus anthracis	0.03
Bacillus cereus	25
Bacillus circulans ATCC 9961	6.25
Corynebacterium xerosis	0.03
*Diplococcus pneumoniae	0.06
Escherichia coli ATCC 8739	>100
Gaffkya tetragena	0.015
Micrococcus flavus	0.015
Salmonella paratyphi A	25
Salmonella typhosa	>100
Sarcina lutea ATCC 10054	0.007
Shigella sonnei	100
Staphylococcus aureus 209P	0.03
Staphylococcus aureus var. Smith	0.03
Streptococcus agalactiae ATCC 1077	0.03
Streptococcus dysgalactiae ATCC 9926	0.03
Streptococcus faecalis PCI 1305	6.25
*Streptococcus pyogenes 203	0.06
*Streptococcus pyogenes Digonnet	0.06
Streptococcus pyogenes 2320	0.03
Streptococcus pyogenes 23586	0.06
Vibrio comma	25

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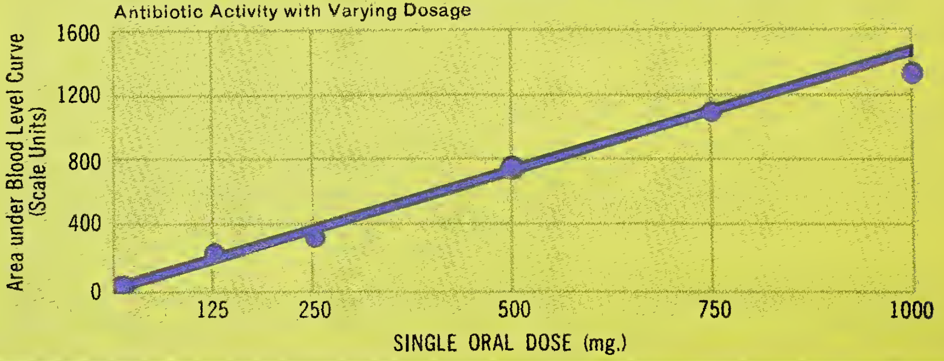

*As is true with all antibiotics, clinical response does not always correlate exactly with in vitro bacterial sensitivity reports or laboratory blood level findings. However, these are useful guides.

Dosage: 125 mg. or 250 mg. 3 times a day, depending on severity of the infection, and on age and weight of the patient. Larger dosage (e.g., 500 mg. t.i.d.) may be used for more severe infections. Although maximum absorption is obtained in the fasting patient, clinically adequate blood levels are almost always obtained when SYNCILLIN is administered with meals. Treatment should be continued until physician is confident infection has been overcome. ☐ Beta-hemolytic streptococcal infections should be treated for at least 10 days to help prevent the development of rheumatic fever. Even more prolonged therapy may be required for certain staphylococcal infections. ☐ Complete information on indications and precautions is included in the official circular accompanying each package.

Around The State

New Haven County

Miss Dorothy W. Alling, Associate Director, Nursing Service, Grace-New Haven Community Hospital died on October 27, 1960 after a long illness.

Miss Alling was a graduate of the Connecticut Training School for Nurses in 1926 and had served in the Department of Nursing since her graduation. In her memory the Dorothy W. Alling Memorial Fund has been established. The income from this fund will be used to support an annual lecture on some phase of nursing service.

Friends of Miss Alling may send contributions to this fund: Miss Anne E. Ryle, Grace-New Haven Community Hospital.

Attention To Diet Could Prevent Kidney Stones

If as much attention were paid to the diet of adults as it is to children, "tremendous strides" could be made in preventing kidney stones, Dr. Hans H. Zinsser, New York City, said.

"Among the most striking changes in pediatric practice over the past 30 years has been the gradual disappearance in the United States of the problem [of kidney stones] . . . in children," Dr. Zinsser said in the current Journal of the American Medical Association.

"Increasing attention to the nutritional problems of children is the only common factor to which this progress can be attributed. It seems highly likely, if similar attention is paid to the diet of adults in the United States and to children in the rest of the world, that tremendous strides can be made in the prevention and eradication of the stone problem."

Dr. Zinsser said attention should be directed to relative deficiencies within known nutritional intakes rather than to any single deficiency.

In discussing calcium-containing stones, he said: "The American diet, like that of many other countries, is higher in milk products than is necessary for bone maintenance in adults. Whereas the normal individual may tolerate urinary calcium loads of several grams a day, it is unlikely that the patient shown to have a predilection for forming kidney stones can do the same."

He also pointed out that some commonly used antacid preparations are high in calcium carbonate content.

Special Notices

Within the past few months two 'Circular Letters to Physicians' from the Laboratory Division of the Connecticut State Department of Health have been sent to all Connecticut physicians.

In cooperation with the Laboratory Division, the Rheumatic Fever Committee of the Connecticut Heart Association has worked out a pilot program whereby throat swabbings submitted to the State Laboratory for culturing will be reported *by telephone* on the same day that the isolation is read. This additional service will be provided at no cost to either physician or patient and it is expected to increase the value of throat swabbings and thus lead to a more wide spread use of the service.

The Rheumatic Fever Prophylaxis Program of the Connecticut Heart Association is widely known. This program, however, is for the prevention of secondary attacks of rheumatic fever. In its concern and interest in some form of primary prevention of rheumatic fever, and Rheumatic Fever Committee of the Connecticut Heart Association is making every effort to emphasize the importance of the proper diagnosis of and the full course of treatment for a beta hemolytic group A streptococcal infection.

The cooperative telephone reporting venture is being limited to a 12 month period during which time a careful study will be attempted of streptococcal infections, geographic distribution (if any) cost analysis of the addition of the telephone reporting, etc.

For further information on primary and secondary prevention of rheumatic fever, physicians may obtain from their local Heart Association on request "Prevention of Rheumatic Fever and Bacterial Endocarditis Through Control of Streptococcal Infections" which was prepared by the Committee on Prevention of Rheumatic Fever and Bacterial Endocarditis appointed by the Council on Rheumatic Fever and Congenital Heart Disease of the American Heart Association.

Less TB Said To Be Factor In Increasing Lung Cancer

A decline in deaths due to tuberculosis was suggested as a factor in the increasing occurrence of lung cancer.

Writing in the current Journal of the American Medical Association, Doctors Broda O. Barnes, Denver, and Max Ratzenhofer, Graz, Austria, said more persons were surviving TB early in life only to contract lung cancer in their later years.

Nature, it has been observed, is the original promoter–for constantly and ingeniously she is expanding her creations.

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Book Reviews

CELLULAR ASPECTS OF IMMUNITY. Ciba Symposium, G. E. W. Wolstenholme and Cecilia M. O'Connor, Editors for the Ciba Foundation, Little Brown & Company, Boston, Mass. 1960, 477 pp. $10.50.

Reviewed by Donald W. King

This symposium was held in France in June 1959 and included a group of 32 experts in the field of antibody synthesis. The three day discussion was conducted without any attempt to educate the participants in basic concepts of immunology, genetics, or protein chemistry. The book, in general, is therefore of minimal value to those having little research interest or experience in these particular fields.

A central chapter involves a panel discussion on the clonal selection theory of antibody formation. This hypothesis, vigorously supported by Burnet and Lederberg, has become a controversial impetus to numerous experiments regarding the genetic control of antibody synthesis. Briefly it proposes that only a few cells, in particular a clone or group of cells derived from a single cell, are capable of producing antibody to a single antigen. A particular antigen acts, therefore, by stimulating further proliferation of the clonal cells which are ultimately converted into antibody producing plasma cells. The original theory suggested that each individual clone was only capable of producing a single individual antibody and multiple antibodies required the proliferation of multiple different clones. It is now clear that a single cell may produce at least two antibodies, but the description and function of the hereditary "memory cells" requires much additional investigation.

Other excellent chapters for those most interested in disease entities include the chapter by Gorer on homograft reactions and the chapter by Halperin, et al. on the mechanism of fixation of anaphylactic antibody. It is becoming increasingly apparent that many disease states may be the result of the formation of intracellular antigen antibody complexes, perhaps initiated by the mechanism of autoimmunization. Systemic lupus erythematosus is discussed from this viewpoint.

This volume will undoubtedly stimulate work in the field which will very soon have wide practical applications.

NEUROPHARMACOLOGY. Transactions of the Fifth Conference. Harold A. Abramson, M.D., Editor, The Josiah Macy Jr. Foundation, New York, 1960, 240 pp. $6.00.

Reviewed by Nicholas Giarman

This volume comprises the edited tranactions of the fifth conference on Neuropharmacology sponsored by the Josiah Macy Foundation and held in May, 1959. This conference engaged in discussions on four main topics: Amine metabolism and pharmacological implications; central action of chlorpromazine and reserpine; effect of serotonin on evoked potentials; and biochemical sites of action of psychotropic drugs. The value of these published proceedings lies more in bringing investigators in the field up-to-date on new developments and thinking in the area, than in providing background information for the student or uninitiated worker in the field. Moreover, this value is, as usual, diminished in proportion to the time which elapses between the actual conference and publishing of the proceedings (in this case, the time-lag has been about 18 months), and to the number of times similar material has appeared in other symposia and reviews.

The greatest proportion of this book is devoted to the topic of amine metabolism which is ably presented by Dr. S. Udenfriend, a competent and productive investigator in this field. In addition to a great deal of provocative and interesting information, Dr. Udenfriend raises a number of points which are not entirely clear to the reviewer. He implies, for example, that the localization of a neurohumor is an indication of where the substance is used (p. 12). While this is largely true, there are instances where it may be quite misleading: e.g. the large amounts of acetylcholine and serotonin in the spleen. Such accumulations might as well be indicative of regions in which enzymatic breakdown of the neurohumor is slow or non-existent. Another implication made by Dr. Udenfriend concerns the precursor of serotonin, 5-hydroxytryptophan (5-HTP). He states (p. 14) that as fast as 5-HTP is formed, it is decarboxylated. There is no question that the decarboxylase acts with high velocity, but it is possible that 5-HTP may be stored, as it is formed, a possibility which has not yet been systematically investigated. Raised also in this section by Dr. Udenfriend is the controversy over whether 5-HTP decarboxylase (which forms serotonin) and DOPA decarboxylase (which forms nor-adrenaline) are one and the same enzyme. Discussions in the future may be spared any more time devoted to this subject, since evidence has accumulated strongly in support of a single enzyme.

Dr. B. B. Brodie, another outstanding investigator in this field, presented some interesting ideas and facts about binding and release of serotonin. One weakness displayed by workers in this area, however, has been their willingness to accept platelets as model systems for studying phenomena of uptake and release. Platelets represent merely means of transportation for the amines, and in the reviewer's laboratory, for instance, it has been found that brain cells differ markedly from platelets in their characteristics of amine uptake. Another point made by Dr. Brodie to which this reviewer takes exception is his statement that iproniazid does not affect the release of serotonin in platelets or other organs. Giarman and Schanberg (Biochem. Pharmacol. 1:301, 1959) showed that iproniazid does indeed hinder reserpine-induced release of serotonin from storage granules in rat's brain. Recently, the same has been found to be true about release of catecholamines from rabbit's atria.

These objections and criticisms are raised here only to present one of the apparent weaknesses of such conferences. Often, leading investigators in these discussions make incompletely substantiated assertions which are accepted as well-established facts.

Dr. K. Killam once again has presented in the second section of this volume his wife's and his work on an electrophysiological interpretation of the mode of action of the tranquilizers. They marshall strong evidence for establishing the reticular formation as a site of action of both reserpine and chlorpromazine. Especially attractive is their demonstration that both tranquilizers have the same action on this brain region: that of augmenting the effect of peripheral stimulation (input) upon it.

Dr. W. P. Koella has made use of a technique similar in some respects to that of Dr. Marazzi and co-workers, to arrive at a similar conclusion—that serotonin is an inhibitory neurohumor. Dr. Koella used the cortical evoked potential from a light flash on the retina. The most valuable part of his presentation is the analysis of his data to show that 3 factors are involved in this neuro-inhibitory action of serotonin: 1. stimulation of the carotid sinus; 2. subcortical inhibition which has a bilateral effect; and 3. cortical inhibition which is ipsilateral.

The last section of this book is devoted to another presentation of Dr. Brodie's hypothesis that Hess' central ergotropic system is adrenergic in characteristics of transmission, while his central trophotropic system is "serotonergic." This is, at best, a considerable over-simplification which challenges experimentation to refute it.

A PSYCHIATRIST SPEAKS: THE WRITINGS AND LECTURES OF DOCTOR C. CHARLES BURLINGAME, 1885-1950. Foreword by Doctor John I. Nurnberger. Biographical Sketch and Editorial Notes by Arline Boucher Tehan. Limited Edition. Copyright 1959 by Mrs. C. Charles Burlingame. Privately printed. 189 p.

Reviewed by John Houck

The late Dr. C. Charles Burlingame was Psychiatrist-in-Chief at the Institute of Living from 1931 until his sudden death in July, 1950. This collection of his speeches and writings embraces primarily that period.

Dr. Burlingame's literary productions reflect contemporary descriptions of his personality. Restless, impatient, breezy, sometimes bitingly sarcastic, these are the views of a man who was much more preoccupied with action than with theory. He addressed himself to the public as often as to his own profession and public education was one of his great passions long before it was fashionable. He spoke often in homely fashion and sometimes in platitudes. Yet one feels that even his sharpest professional critics (and there were many) must now be impressed by the extraordinary contemporary relevance of many of his ideas. Thus we see his insistence on a 'total push" for every psychiatric patient, his suspicion of undue therapeutic permissiveness, and his emphasis on the importance of appropriate rehabilitative procedures for the mentally ill. The latter was one of his favorite topics and he preached it to the end of his life. "In therapy," he insists, "one typewriter is worth ten looms as an affirmative instrument. Few looms, rag rugs, or raffia baskets are found in normal society other than that of the Hopi Indians."

Time has shown that Dr. Burlingame was well ahead of his era in some respects. He predicted the present upsurge in the use of drugs in psychiatry and the increasing integration of psychiatry into medicine. He ranted against the "asylum" and pleaded that the mental hospital should be "the most normal place in the world."

Dr. Burlingame displaced, in some respects, a paradoxical therapeutic orientation. No man was swifter to embrace any new organic approach to mental illness. But, he seems in retrospect to have retained certain canny reservations even about his own projects. Zealot he may have been, but was wary of the age-old tendency toward premature therapeutic enthusiasm. Thus, in a speech in 1941, he said, "For our own part, we should be particularly careful to see that we are not drawn into the practice of little hypocrisies and that our acceptance of new therapies shall be with due caution, tongue in cheek, and with a full recollection of the vast array of therapies that have come, lived their little day, and passed on."

RUDOLPH MATAS by Isidore Cohn, M.D. and Herman B. Deutsch. Published by Doubleday & Co., Garden City, New York, August 1960, 431 pp. $5.95.

Reviewed by Denis S. O'Connor

Dr. Matas was primarily a surgeon. It was in the field of surgery that he made his name and one would expect that his contributions to surgery would dominate his biography.

Unfortunately, this is not the case and after plowing through four hundred and thirty-one pages of domestic problems—which were not peculiar to Dr. Matas,—to his association with Lafcadio Hearn, and his medical and civic honors, one remembers mainly his contribution to aneurism surgery. To be sure yellow fever in its occurrence and its cause, gets considerable coverage but this has no surgical aspects.

And yet those who have been in the profession of medicine in the past half century could not have been unaware of Rudolph Matas' place in the surgery of this era of the technical development of surgery as distinct from the anatomical approach which preceded it and the physiological emphasis of the present.

Matas was one of that group of surgeons which included Murphy, Halstead McDowell, Senn and the Mayo brothers, who coming to maturity with the beginning of the aseptic era, designed many of the operative procedures which are in common use today.

Dr. Matas by the high place which he occupied in the field of surgery warrants a biography in which his contributions in that field may be highlighted and the personal and domestic phases of his life muted.

Perhaps it is unfortunate that his biography followed so closely his departure from this earth and that its penning by a loyal disciple has denied the objectivity which can only come with the passage of time. When that biography is written, the facts material and immaterial in the present biography may serve a useful purpose.

PHYSICAL DIAGNOSIS. THE HISTORY AND EXAMINATION OF A PATIENT. By John A. Prior, M.D., Professor of Medicine, and Jack S. Silberstein, M.D., Clinical Associate Professor of Medicine, Ohio State University College of Medicine. The C. V. Mosby Co., St. Louis, Missouri, 1959. 363 pp. $7.50.

Reviewed by Louis H. Nahum

What are the tools of a doctor's trade? The history, the physical examination and essential medical terminology. To be sure there have been recent refinements and an increasing number of laboratory procedures, but the intellectual pleasure comes when, in making a diagnosis, the student uses his knowledge of history taking, his acute inspection, and further examination of his patient, and is then able to translate his findings into correct terminology. This type of experience requires for its success close attention to detail and concentration upon the data acquired from acute observation of the patient. When attention during the examination lags, because of a wish to have the whole problem solved by a laboratory procedure then, the intellectual pleasure and excitement in making a diagnosis suffers.

It is well known that in some diseases significant physical findings are sparse or non-existent. Then the student realizes the value of a good history. In fact thus far there has appeared no substitute for the value of a good history. In this book much space is devoted to the development of the patient's history. In this respect this book on physical diagnosis is superior to most other text-books on this subject.

The book also contains a detailed discussion of the review of body systems. This is laudable because it introduces the student to a large number of clinical terms with which he must become familiar, for without terminology there is no real communication. In this sense the review of systems serves as a sort of glossary of commonly used medical terms. But there is another purpose in a review of systems and terminology. The words are not enough, what is their relative significance? If the student knows this, then, for example if the patient complains of orthopnoea, and if the student knows of its close association with heart disease, he can intelligently pursue the further questioning. This aspect is admirably performed in this book.

However, physical diagnosis should start first with understanding the normal for otherwise how can the student appreciate the abnormal? This book has the great merit of making explicit the normal and it has done this by a superb ability to cut through the overwhelming amount of detail that has accumulated in this field and strictly adhering to the principle of simplicity and brevity. The beginner will be grateful for the successful way in which the authors have succeeded.

The student will also thank the authors for having moved away from using eponyms (personal names). For example what good is it to speak of Stensons duct and not know about the parotid gland? A term should convey a meaning and the authors have followed this laudable principle.

Of the fifteen chapters, the authors have done six and important authorities in special fields have covered the others. The pediatric examination by Baxter, the motor skeletal system by W. S. Smith; the breast by A. G. James; abdomen and genitalia by F. M. Beman; the female genitalia by W. E. Copeland; the nervous system by D. M. Palmer; the eyes by W. H. Havener and the ears, nose and throat by W. H. Saunders.

The book is beautifully printed on excellent paper and has a long index of 23 pages. It should make the student happy and stimulated.

THE YEAR BOOK OF DRUG THERAPY, 1959-1960 SERIES. Edited by Harry Beckman. The Year Book Publishers, 200 East Illinois St., Chicago 11, Illinois. $9.00.

Reviewed by Louis H. Nahum

This book contains clinical and experimental evaluation of drugs in every field of medicine from allergic disorders through cardiovascular disease, through broncho-pulmonary diseases, dermatology, gastroenterology, hematology, infectious diseases with urinary tract infections, worm infestations, kidney, liver, neoplastic diseases, neuropsychiatric disorders, obesity. There are presented drugs of use in obstetric and gynecologic disorders, for pain and fever, in rheumatic and surgical disorders. There is to be found after some of the reports penetrating comments and guidance from the editor which is important for the average reader. One might wonder that with Merck's manual and Park Davis listing of drugs what more can one learn from this book? The answer is a great deal, for here the drugs are tested by clinical investigators, the results are editorially commented upon by a fine Therapeutist and one is left in no doubt about which drugs may be expected to do what.

What is new in this book as compared to previous volumes is a chapter on critical evaluation of the year's new drugs, in which all the drugs are listed alphabetically and each is briefly appraised by the editor in a most precise and authoritative fashion. A most edifying part of the book is an introductory chapter bringing in correct perspective the whole controversy raging at the present time about the use of new and expensive drugs, as well as a lesson on pharmacology in which "Bases for judgment of a new drug," are beautifully and authoritatively presented.

One should read the whole book through but even if time does not allow this, the guidance accorded the reader in the analysis of each drug and the philosophy of pharmacology found in the beginning of the book will make the whole book one which every physician should wish to own. It is most highly recommended.

THE EXTREMITIES. By Daniel P. Quiring, Ph.D., and John H. Warfel, Ph.D. Published by Lea & Febiger, Philadelphia, Pa., 1960. Second Edition with 106 Illustrations. 120 pp. $3.25.

Reviewed by Denis S. O'Connor

This book on the muscles, their nerve and blood supply, origen and insertion and function was first published in 1945 and has eight reprintings which attest to the valuable place it has found in the study of muscle anatomy and function.

Unquestionably, accurate understanding of muscle function can be important in many medical specialties as well as the motor points of the nerve supply. Each muscle is given a separate page showing the muscle in outline with its nerve, or nerves, and blood supply in relation to the bony structures. Each structure is covered by references to Gray and Cunningham.

While this is essentially for the student and teacher it can be a source of pleasure and value in the library of anyone who must have accurate knowledge of the muscles and their enervation.

THE HEAD, NECK AND TRUNK. By Daniel P. Quiring, Ph.D., and John H. Warfel, Ph.D. Published by Lea & Febiger, Philadelphia, Pa., 1960. Second Edition with 109 Illustrations. 124 pp. $3.25.

Reviewed by Denis S. O'Connor

This companion volume to "The Extremities," originally published in 1947 with seven reprintings could have an even wider usefulness than "The Extremities" inasmuch as the importance of accurate muscle location and nerve supply is required in surgical dissections, especially of the neck.

Like its companion volume, its illustrations are of such instant clarity that a little attention could well leave a lasting visual impression on the mind of the student.

Doctor's Office

Alexander Bellwin, M.D. and Richard S. Banfield, Jr., M.D. take pleasure in announcing the formation of their partnership for the practice of obstetrics and gynecology and the removal of their offices to Medical Arts Building, 144 Morgan Street, Stamford, Connecticut.

Sidney L. Cramer, M.D., and E. Marvin Henken, M.D., announce the opening of an office for the practice of radiology at 33 Berlin Avenue, Southington.

Robert Dinolt, M.D., announces the removal of his office from 28 Front Street to Hotel Putnam, Union Square, Putnam.

David Luchs, M.D., announces the opening of an office for the practice of general medicine, in association with Dr. Richard J. Cobb at Greenwoods Road East, Norfolk.

Arthur F. Sullivan, M.D. announces the removal of his office from 111 West Main Street to 493 Willow Street, Waterbury.

The Connecticut Physicians Art Association 1961 Exhibition

The Connecticut Physicians Art Association will hold an exhibition at the Annual Connecticut Medical Association Meeting in Hamden High School on April 25, 26, and 27, 1961.

Exhibits will be received for display on Sunday, April 23, 1961. Exhibits may be delivered at the Hamden High School by noon on April 23 or, if preferred, may be delivered to Collection Centers in each county before this date to be transported by members of the committee. On the last day of the exhibition, exhibits will be returned to the Collection Centers for claimants, or they may be removed from Hamden High School by personal representatives of the owners after 4:00 P.M. on April 27, 1961.

Collection Centers will be in Litchfield, Hartford, New London, Bridgeport, New Haven and Waterbury and exact locations will be published in the Journal in February and March.

Entry blanks for registration of exhibits will be mailed in January to former exhibitors and anyone in the professional field who applies. Additional blanks and further information may be obtained from Mrs. Ernest Rosenthal, 17 Pine Road, West Hartford, Conn.

Mrs. Rosenthal is the Chairman of the Woman's Auxiliary Committee on the Physicians Art Show. She will be assisted by members from each county whose names will be announced later. A hanging fee of $1.00 will be charged for each single exhibit, payable to Mrs. Rosenthal.

The Permanent Physicians Art Committee is comprised of physicians who are actively engaged in an art hobby. This consists of Dr. Edwards Williams of Southbury, Dr. Richard Starr of New London, Dr. Charles O'Neill of Hartford and Dr. John M. Freiheit of Waterbury, President of the Association. Mrs. Orvin Hess of New Haven is permanent Secretary of this committee. Information concerning the exhibit can be obtained from any member of these committees but for purposes of registration and coordination, all communications should be addressed to Mrs. Rosenthal.

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**References available on request.*

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Connecticut Health Careers

Mrs. Edward P. Allen, state chairman of paramerical careers reported on the progress of the State Health Careers Committee to the meeting of the Board of the Women's Auxiliary held January 9, 1961, at the Grantmoor in Berlin.

The meeting at which Mrs. Allen represented the Auxiliary was held Nov. 16, 1960, at the New Haven Lawn Club. An M.D. representative from each of the eight counties in the state was present and each person present was fully briefed on how best to carry out this program in his local area.

It was noted that a commercial firm from out of the state has been supplying guidance counselors in different high schools throughout the state with the film "Helping Hands For Julie." Steps are being taken to reserve this film for exclusive use in the Connecticut Health Careers program. In the meantime, our workers have been asked, where possible, to set up our own program around the already scheduled dates. A questionnaire has been mailed to guidance people inquiring about the effectiveness of our program and asking for suggestions for the future.

Safety

The Auxiliary has been included in a ten-organization committee known as the "Advisory Committee on Women's Activities" to Safety Commission of the State of Connecticut. This committee is a result of a resolution made last May by the Governor's Conference on Safety. The purpose is to provide a structure through which a reliable exchange of information about safety activities can be made among the numerous women's groups in the state. A pamphlet of ideas to be issued twice a year has been proposed.

The first meeting of this committee held on Nov. 3, 1960, was concerned with traffic safety. A second meeting held in January dealt with other phases of the safety program.

A.M.E.F.

The sale of 50 new CAN-OPENER COOKBOOKS by Poppy Cannon at $4 each at the semiannual meeting of the State Auxiliary made a profit of $81.50 to be entered as an A.M.E.F. contribution by our members. Our chairman reminds us to remember the new slogan for A.M.E.F.:

A. Annual gifts allow our
M. Medical Schools to
E. Enjoy continued
F. Freedom.

Too Many Vitamins Can Be Harmful

Americans were reminded that taking an excessive amount of vitamin supplements can be harmful.

The Journal of the American Medical Association in an editorial said "the fallacy seems widely disseminated that every healthy individual must consume multivitamin pills" to obtain an adequate diet.

"On the contrary," the Journal said, "only in a deficiency state or an anticipated deficiency state are vitamin supplements necessary.

"Under such circumstances it is the responsibility of the physician to recommend supplementary vitamins, and the decision regarding dosage and kind of vitamins must reside in the physician. . . ."

If single or multiple vitamins are taken without sound clinical indications, trouble may appear, the editorial said.

An overdose of vitamin A can lead to loss of appetite, irritability, skin eruptions, or enlargement of the liver, it said, and too much vitamin D may lead to gastrointestinal symptoms.

The position of the AMA on vitamin supplements, as stated by its Council on Foods and Nutrition in January 1959, is that "all the nutrients essential to the maintenance of health in the normal individual are supplied by an adequate diet."

Obituaries

Francis Murphy Harrison, M. D.
1896 - 1960

Dr. Francis M. Harrison's death created a void in the ranks of the medical profession in Stamford that will never be filled. The people of Stamford, also, lost one of it's most gifted surgeons. He enjoyed the confidence and love of every patient who came in contact with him, because of his competence and gentleness. He understood their problems and gave of himself both medically and personally to help them solve them.

Dr. Harrison was educated in the Stamford schools; his primary education at St. John's Parochial School and his secondary at Stamford High School. He did his pre-medical work at Holy Cross College, and graduated from Jefferson Medical College in 1922. His early training in surgery was done at St. Vincent's Hospital, New York City and from there he became an instructor in surgery at the New York Medical Center, where he worked for many years.

He was a member of the American Medical Association, Connecticut State Medical Society, Fairfield County and Stamford Medical Society. He served on the Board of Medical Advisors of the Industrial Nurses Association. In addition, he was a director of the Board of Medical Advisors of the Stamford Rehabilitation Center and a member of the Board of Directors of the Visiting Nurse Association. He held fellowships in both the American College of Surgeons and the American College of Abdominal Surgeons. He was a member of the Knights of Columbus and a trustee of St. John's Roman Catholic Church.

When St. Joseph's Hospital opened, Dr. Harrison became it's first chief of staff, a position he held until reorganization of the by-laws in 1957. He also served as the only physician member of the Board of Directors of the Hospital.

Dr. Harrison brought to Stamford great skill and judgment in the field of surgery that was recognized by his fellow physicians, both in and out of the city. His keen judgment and vast knowledge of surgical problems made him always in demand for consultations by his contemporaries. He was an outstanding technician, and despite his pre-eminent position he was still a gentle and humble man. His greatest joy was instructing the younger men, and during medical conferences, his comments on the subjects under discussion were always asked for, because he always was able to call upon his past experience and bring out an interesting facet that would be both pertinent and educational.

With the death of his beloved wife five years ago, Dr. Harrison has been a very lonely man, for they were very close. We, who are left behind, can only hope that this wonderful, gentle, humble man is once again united with his loved one, in accordance with God's reward for a job well done on this earth.

William F. Stankard, m.d.
A. Frederick McGourty, m.d.

Israel Beatman, M.D.
1900 - 1960

Dr. Israel Beatman died suddenly on Wednesday, November 30, 1960, while about to attend a court hearing in New Britain. His untimely death came as a profound shock to all. Dr. Beatman, or "Iz" as he was affectionately known to his many friends, was born in Russia, and came to the United States at a very early age. He received his elementary and secondary schooling in the Hartford school system. He attended Trinity College and received his degree in 1923. His next four years were spent at Tufts Medical School in Boston, from which he received his M.D. degree in 1927. He spent the following year as an interne at St. Mary's Hospital in Waterbury, Connecticut. Dr. Beatman then came to Hartford, and started in the general practice of medicine. Through his association with Dr. Max Hurwitz, whom some of you will remember, Dr. Beatman became interested in orthopedics. He received special training in this field in New York City. In the last fifteen years his practice came to

Israel Beatman, M.D.
1900 - 1960

consist primarily of orthopedics. He was a member of the orthopedic staffs of the Mount Sinai and the McCook Memorial Hospitals, and was also on the courtesy staffs of the St. Francis and the Hartford Hospitals in Hartford.

Dr. Beatman was also very active in civic affairs. He was for many years a member of the board of directors of the Hartford Jewish Federation of the Emanuel Synagogue and the Emanuel Brotherhood. He was also a member of the Masonic order and had memberships in the following organizations: Hartford Medical Society, Hartford County Medical Association, Connecticut State Medical Society, and American Medical Association.

He is survived by his wife Ethel Kleinman Beatman and a son, David of West Hartford, and a daughter, Mrs. Marion Fixman of Pittsburgh, Pennsylvania. He also was the proud grandfather of an infant daughter of Marion's.

His ready willingness to give a helping hand, his excellent general knowledge of medicine, his liberal charity and his friendliness have earned for him the lasting esteem of his colleagues and the affection of his many friends.

MANUEL S. HIRSCHBERG, M.D.

In Memoriam

Brennan, Patrick J. — Waterbury; Yale University School of Medicine, 1907; conducted a medical practice in Waterbury for 52 years; joined the staff of St. Mary's Hospital when it was organized in 1909, became chief of staff in 1948 and served in that capacity until 1954; named Knight of St. Gregory in 1957 by Pope Pius XII; died January 6 following an illness of only a few hours, aged 77 years.

Cohane, John F. — New Haven; New York Medical College, 1950; served in the Navy during World War II; returned to his medical studies following his war service and interned at St. Raphael's Hospital, New Haven; he was then called to serve as a Captain in the Army Medical Corps during the Korean War and upon discharge returned to New Haven and started a medical practice; died suddenly of a heart attack January 6, at age of 40 years.

Grossman, Walter — Hartford; University of Berlin Medical School, 1920; a member of the medical staffs of St. Francis and Mt. Sinai Hospitals, Dr. Grossman practiced medicine in Hartford and East Hartford for 22 years; he was born in Berlin, Germany, January 1, 1896; he was a member of the Congregation Tikvoh Chadoshoh and edited its newspaper for many years; died December 18 at St. Francis Hospital, Hartford, aged 64 years.

Harned, Alden S. — Hartford; Wayne University College of Medicine, 1944; Dr. Harned was assistant medical director in the life, accident and group division of the Travelers Insurance Company at the time of his death; he had previously served as supervisor of the health and safety section and as industrial physician with the Pratt tand Whitney Aircraft Corporation at the North Haven and East Hartford plants; died suddenly at his home December 15, at the age of 45 years.

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Volume XXV MARCH, 1961 Number 3

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169TH ANNUAL MEETING
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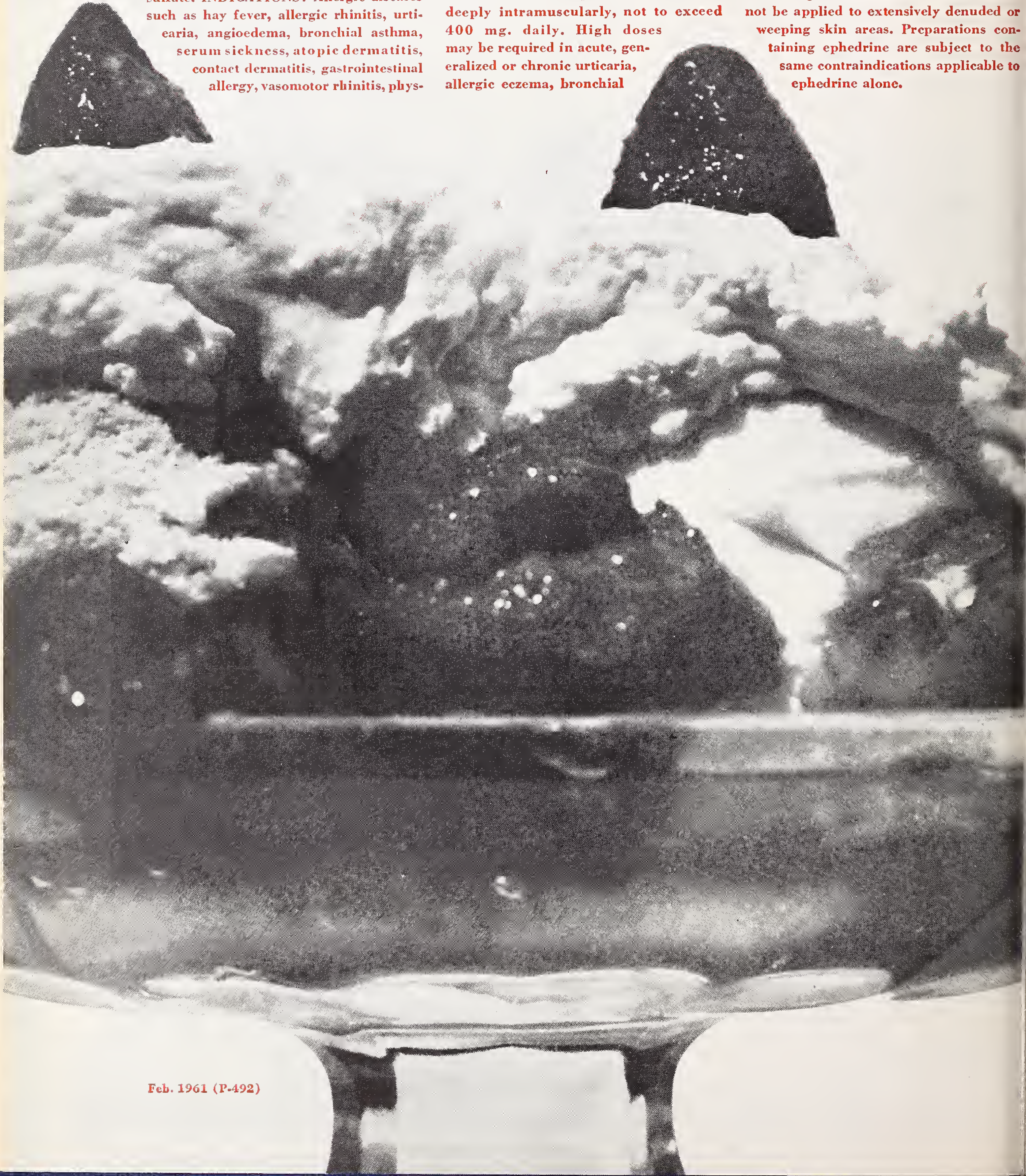

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1. Barden, F. W., et al.: J. Maine M. A. 46:99, 1955.
2. Ford, R. A., and Blanchard, K.: Journal-Lancet 78:185, 1958.

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GROWTH WITHOUT GLAMOUR

In September 1912 I suddenly decided to study medicine. I walked up to York Street, the old Yale Medical School, entered the corridor of a high-ceilinged old building, dark and musty, and inquired of the secretary if I could see the Dean. I was ushered into a quiet room, and Dr. George Blumer rose to meet me. After being made comfortable, a solemn man with little levity asked me what my visit was about. "I wish to study medicine," I replied, explaining I had just graduated from Sheff in June. Without any fanfare he replied quietly "Very well, sign your application here. School will begin next week." "But sir," I gasped, "I don't have my tuition yet." "Oh that can be arranged by scholarship," he replied. And that was that.

The school registration had dwindled to nine for our incoming class, but the requirement of a college degree for preparation to study medicine was the permanent rule for Yale Medical School, which was carried through quietly but with fortitude by its author, Dr. Blumer. It was a new philosophy in medical education brought on by Abraham Flexner in Johns Hopkins. Yale, having obtained George Blumer, was one of the first to feel the fresh breezes of the future which were to sweep away the old ashes of the medical past and in the words of Ezekiel '37, add flesh and sinews and skin to the old bones. Medicine at Yale prior to George Blumer was suffering from a serious disease producing dwindling of inner resources. Medicine at Yale when he left the helm was a lusty infant with prodigious potentialities as the present great center of medical research and teaching eloquently attests.

George Blumer commanded the Yale Medical School in a period of transition. It was a great period in retrospect although it experienced growth without glamour. The change in entrance requirements was a revolution, but it was so quiet that no one knew it, and the quietness was accentuated by the very diminutive student body. But the teaching was carried on by experts like Ferris, Flint, Slemons, Tileston, Bartlett in Pathology, Smirnow in Microbiology, and the Dean himself. The bedside teaching was of the highest quality. Astute clinicians taught physical diagnosis, and the bedside diagnosis was probably not excelled anywhere. It was in the true Oslerian tradition.

It was the era preceding the one in which experimental medicine came into its own. It was a period of therapeutic nihilism and encyclopedic learning. Without doubt George Blumer was the last of the encyclopedists who gracefully gave way to the new era of experimental medical science that was pressing hard upon the educational institutions. He saw the wave of the future and thought it was good. He began collecting funds for a new plant and a new full-time faculty which he himself knew must replace him. Undaunted, he followed his vision, collected several million dollars and launched the new administration in 1920. This type of activity certainly exalted his goodness, his dignity, his selflessness and his wisdom in recognizing his rightful place in medical education. His was a caretaker government, but he initiated all the reforms which were to revolutionize medical education at Yale. A true believer in democracy, he prepared the "government" well for its successors, the young men of a new generation. He thus exhibited, and by example, exalted, man's goodness, dignity and belief in man. George Blumer at Yale initiated growth without glamour.

Louis H. Nahum, M.D.

Courtesy of Yale University Art Gallery

George Blumer, M.D.

GEORGE BLUMER M.D.

Dr. George Blumer was born in Darlington, England on March 16, 1872, the son of John George and Julia Edith (Walford) Blumer. He was educated in English grammar schools from 1880 to 1886 when he moved to the United States and completed his grammar school education in California. He received his M.D. degree from Cooper Medical College, San Francisco in 1891. He interned in the City and County Hospital, San Francisco in 1892-93 and was a postgraduate student in Johns Hopkins Hospital from February to June, 1893. He was a surgical house officer in Johns Hopkins Hospital, 1894-95, under Dr. William S. Halstead, medical house officer in 1895-96, under Drs. William Osler and W. S. Thayer, and assistant in pathology under Drs. William H. Welch and Simon Flexner, 1896-97. In 1896 he was appointed Director, Bender Hygienic Laboratory, Albany, New York, where he remained until 1903. He was Professor of Pathology and Bacteriology at Albany Medical College (Union) New York, 1902-03. He was Associate Professor of Pathology, Cooper Medical College 1903-04, and Assistant in Medicine, University of California Medical School, 1905-06, when he was named the John Slade Ely Professor of the Theory and Practice of Medicine at Yale University Medical School.

In 1910 he became the Dean of the Medical Faculty at the Yale Medical School and continued in that position until 1920.

In 1920 he was named David P. Smith Professor of Clinical Medicine in which position he continued until 1939 when he retired from active teaching at Yale with the rank of Professor Emeritus.

Following his retirement as Dean of the Yale Medical School and until he removed to California to retire from the practice of medicine, Dr Blumer engaged in the private practice of medicine as a Consultant in Internal Medicine before the days of widespread specialization and his services were in demand throughout the entire State of Connecticut and even beyond the state borders.

Dr. Blumer was many things. He was an outstanding diagnostician. He was an educator and after his days of active teaching in the Yale Medical School he spent much time in the diagnosis of the medical ward problems at St. Raphael's Hospital in New Haven where his clinics were well attended. He was a writer, as the long list of his contributions to medical literature will attest, and his philosophical writings can be found in the issues of CONNECTICUT MEDICINE over the many years, even to the present day under two letters, "G.B."

No simple recording of the facts of his career in medicine can tell the story of the work of Dr. Blumer in so many fields. Only the opportunity to know him, to see him in his diagnostic work, to read his philosophical editorials which continue to have current value long after their publication, to sense the true greatness of the man, can one appreciate George Blumer's stature.

Dr. Blumer retired from the active practice of medicine in 1941, since which time he has been living in Balboa Island, California but he continues his interest by his frequent short essays on medical philosophy which continue to appear in the editorial pages of CONNECTICUT MEDICINE.

It seems particularly appropriate that CONNECTICUT MEDICINE should have the privilege of honoring Dr. Blumer by dedicating this issue in the month of his birth to one who has done so much for medical education and medical practice in Connecticut.

DENIS S. O'CONNOR, M.D.

The Sovereignty Of Inanimate Particulates With Reference To Environmental Health

Stanhope Bayne-Jones, M.D.
Washington, D. C.

As sovereignty is usually regarded as an attribute of a personal ruler, governor, lord or master, or of a personified Deity, it may appear to some readers that there is a contradiction in my title. Usage, however, has spread the word over many inanimate abstract and material things. There is a sovereignity of governments and states, and another of goodness or evil, of wisdom or folly, and of charms against devils and fears. In medicine, there are sovereign remedies, such as morphine, and once upon a time during Olearius' voyage there was found in a certain "Province a' Drug very soverain against the Worms." There was once a sovereign mineral against infection, with powers like those of present day wide spectrum antibiotics. Indeed, since matter is composed of inanimate particles and as abstractions and conceptions are formulated by organisms reducible to these particles, therefore ultimate sovereignty must reside in these particulates.

It is becoming ever more clearly recognized in these days that inanimate particulates, with sovereign powers, are forcing a change from the recent microbiological era to a new physical and chemical era, or as it is now called a new era of *environmental health*. The characteristics and consequences, and some of the origins, of this revived and new concern with problems of environment versus man will be the main subjects of this paper, which will deal with them in rather general and philosophical terms.

During the decade of the deanship of Dr. George Blumer, from 1910 to 1920, animate particulates appeared to be dominant among the invisible determinants of many of the activities and a large share of the fate of mankind and animals. These bits of living particulate matter were first the well-defined microorganisms, such as bacteria and fungi, which having inherent vitality could grow and reproduce independently of the cells of higher animals and plants. They were and are the causes of diseases and also producers of benefits. Human beings, animals and plants could not survive without them, although hosts are destroyed by them. A second group, less well-defined, were and are rickettsiae and viruses. These possibly viable particulates require the help of living cells for their growth and replication. The viruses are certainly on the borderline between the living and the non-living. "They are believed to perpetuate themselves by commandeering the genetic reproductive machinery of the cells they invade so that the cells turn from their normal functions to the production of new virus particles in the image of the original invader."

At other institutions I had begun the study of the groups of living microorganismal particles about the time when Dr. Blumer became Dean at Yale, and as I have remained in that field more or less I know how firmly fixed were feelings, if not the intellectual distinctions, between living and non-living things. With ideas that derived from Pasteur's work and the apparent overthrow of the doctrine of spontaneous generation, bacteriologists have always had a sense of dealing with the basic nature and mechanisms of life. It seemed to them, to physicians, and to people in general that the microbiological era and its triumphs were the outcome of man's successful contest with the sovereign animate particulates. The earlier concern of the great sanitarians of the 19th century with the physical and chemical environment of man was given less heed by the biologically-minded leaders of the efforts to prevent, control and cure the ills caused by microorganisms.

As it turned out, while the achievement was difficult, much was accomplished in about a century—much of it during the current lifetime of Dr. Blumer. It is not my intention to describe how these things were done, or even to recount the main events of the "golden age" of microbiology. I do wish to point out, however, that a distinguishing factor was that the struggle was essentially one between man and *other* animate objects. It is true that control of the animate particulates and the disorders that they produced often involved the control of man, animals and insects, as vectors, and involved also some measure of control over human institutions. The types of control, however, were as minimal and as unrestrictive as possible. When dealing with microbial enemies of man the combat is *à outrance*. The objective can be total eradication of the foreign microorganismal cause of the disease. On the other hand, since the now sovereign inanimate particulates are mostly man-made the attack against them has to be mitigated out of regard for the human components in the situation. Their control invokes a control over man more extensive, more restrictive, and more invasive of ancient rights than anything known hitherto in the name of health. This will be a main difference between the earlier era of microbiological health and the presently enlarging era of environmental health. The former era is apt to be remembered nostalgically as one of sanitary laissez-faire, in spite of the inconveniences of immunizations and quarantine. The new era will include more elements of a police state. But, obviously, this cannot be pushed to the point of paralysis or annihilation of the very beings upon whose activities the desired progress depends. When people deal with the man-made byproducts of increasing industrialization, the goal is prevention, reduction, and abatement when possible. As has been said: "In an urban, industrial society we must expect a certain amount of deterioration of our environment.—What must be sought is a balance that permits maximum development at minimum hazard." Even with this concession to practicality, the decisions on public policy and regulatory instruments will be made not by the health profession but by legislators at the center of the Government. In spite of mitigation by the cooperation between local, State and Federal agencies in actions characteristic of the liberal traditions of this country, the regulations will be stringent. The individual will be pressed by restrictions forced upon society by the soverign inanimate particulates of the environment.

---

* *Formerly Dean of the Yale University School of Medicine, 1935-1940.*

The inanimate particles and particulates of our environment range in size from the subatomic to relatively large chunks of fly-ash. They have many extraordinary properties and actions, and all have some relation to the problems of environmental health and the ways of existence on the earth and in space. One would like to catalogue the entirety. In the remainder of this paper, however, I shall mention or discuss briefly only (1) the elementary particles; (2) products of atomic fission, radioactive isotopes; (3) a replicative macromolecule; (4) pollutants of the waters of streams and lakes; and (5) pollutants of the atmosphere.

Perhaps all things will be disclosed from studies of the elementary particles. Sufficient for the purposes of this paper is the following quotation of Dr. George W. Gray's eloquent summary of their supreme powers:

> "The ultimate particles which enter into combination to make hydrogen and iron also enter into the construction of bone and muscle, blood and nerve and brain. In studying the constitution of atoms we are studying the fundamental stuff of the universe—of suns and mountains and seas, the black carbon of coal, the green chlorophyl of grass, the red hemoglobin of blood. Indeed, nature knows no such specializations as physics, chemistry, biology and the other categories into which we fit our fragments of knowledge. She knows only the particles and their incessant interactions as expressed in phenomena such as magnetism, radiation, life, death."

The knowledge of these ultimate particles, so recently gained from studies of spontaneous radiation, atomic fission, and the effects produced by high-energy accelerating machines, touches every phase of man's life. The mere mention of them excites visions of a particulate sovereignty armed with atomic bombs or bestowing useful reactors, flashing with blinding light and ionizing radiation, scattering radioactive isotopes which in one phase poison the air and in another serve thousands of useful purposes. To these particles is owed the opening of the second industrial revolution into which we are now proceeding toward even more momentous political, social, economic, scientific, technical, and spiritual events than have yet occurred. But it is not of these enormous consequences that I shall try to write. Rather I will discuss two effects of atomic energy which seem to me to be of particular interest in a medical orientation.

One of these is the biological effects of radiation from either an atomic explosion or from fission products, especially some of the particulate radioactive isotopes. The immediate sickening or lethal effects of such radiation have been so vividly and widely reported that no more need be said about them here. The possible long-term effects, however, are not yet entirely known. Observations upon the people of Hiroshima and Nagasaki who survived the atomic bomb explosions in 1945 are still in progress by the Atomic Bomb Casualty Commission, and will no doubt be continued for years. For the ordinary citizens of our country and the world, interest centers especially in two radio-isotopes, cesium^{137} and strontium^{90}, which are entering our bodies, and which in time may cause genetic effects, hereditary disorders, and disabilities of various kinds.

The explosion of a nuclear weapon (or reactor) "produces radioactive debris which is carried on the winds to all parts of the world; it falls with the rain and enters the food cycles of plants and animals." No one knows with certainty either what the tolerable dose or load may be for this increased radioactivity in our surroundings and in ourselves, or what will be the ultimate effects. The problems exceed the bounds of medicine. Their full solution calls for world-wide efforts to control these truly sovereign particles by controlling the human activities that break them loose from their confinement in atoms and scatter them in the skies.

Even should this degree of control be achieved, there would still be the necessity to contend with natural radiations, cosmic rays, and many kinds and potencies of radiant energy and particles blasted out by suns, stars and galaxies. In these cases, no man-made noxa are involved and it is not likely that man will ever dampen their sources. His defense rests in protective coverings of one sort or another, and possibly in antidotes yet to be discovered. In whatever posture he may assume, he will still be under the sway of the sovereignty of inanimate particles, living "in a nuclear quandary that makes our period the most uneasy in the history of mankind."

In another direction the inanimate particles from atomic explosions have had an effect upon medical philosophy and medical ethics. They have increased the physician's responsibility for decisions affecting life or death.

Military medical officers, from battalion surgeons in combat to chiefs of surgical services at hospitals in action, and any physicians and surgeons who have had to deal with disasters, have had to face the distressing question whether to attend to the severely injured first or to give first care to those with the better prospect of survival. While I am not able to generalize with certainty, it is my impression that not until recently has there been any fixed policy or any public statements of guides for mass casualty management. Computation of the vast numbers of casualties that can be expected to occur as a result of atomic explosions in populous areas, the comparison of these numbers with the numbers of persons, especially physicians and surgeons, who would be available to take care of the injured, and considerations of the amounts and availability of medical supplies, have forced medical and Civil Defense authorities to give first priority to the injured thought most likely to survive. In plans for mass casualty management, a typical definition of triage and objectives is the following:

> "Ensure that casualties whose conditions are such that recovery is unlikely or that inordinate amounts of time, equipment, supplies and personnel will be required to the detriment of others, are given a low treatment priority classification."

Expressed in another way the emphasis is placed as follows:

> "First priority should be given to the most seriously (but not hopelessly) injured. The hopelessly injured should be made as comfortable as possible."

It is realistic, in the early medical management of mass casualties, to plan and act to establish "priority for treatment to assure medical care of the greatest benefit to the largest number." But the decisions as to who may live and who may die are certain to be hard to make, soul-searching, and diluted by the fallibilities of prognosis. They will be abhorrent to the humane physician. They will be, however, an inexorable requirement of the sovereignty of inanimate particulates.

Mention was made earlier of the concern that microbiologists have had with the nature of life, and that the viruses on the border-line between the living and the non-living seemed, about 1920, to be bringing the bacteriological era to an end and to be indicating that certain inanimate particulates might have some of the properties of life. In recent years it has been discovered that viruses are composed essentially of helical strands of the macromolecule, ribonucleic acid, covered by a protein mantle. The further amazing discovery has been made that RNA, introduced within a living cell, can replicate or reproduce itself, increasing in amount in the process and coming forth again "in the image of the original invader." Thus it is commonplace nowadays to speak of "infectious nucleic acid," applying to a large chemical particle an epithet hitherto limited to living microorganisms. This group of substances constitutes also the material of the genes, the information-carriers and mediators of heredity. The novelty, significance and possible far-reaching consequences of the behavior of particulates of this nature were well-summarized by Dr. Thomas M. Rivers in a recent report, from which a few of his forceful sentences are quoted:

> "In recent years it has been accepted that nucleic acid is the guiding factor in genetics, and work on bacterial viruses has produced evidence to substantiate this.
>
> "The world at large is not yet aware of what this means. That we have reached the point where we can study life in terms of molecules is in itself a marker of history bearing more weightily on human destiny than the hydrogen bomb of our rockets into space. Ultimately the consequences—for good or ill—are likely to be greater.
>
> "Much if not all of mankind's illness is due to sick cells, and much of this sickness is due to nucleic acid having gone bad. Since man can manipulate the nucleic acid in naked nuclei—it is not too much to expect that some day he will be able to manipulate the nucleic acid in whole cells in intact living bodies.

"This means that those who come after us will be able to decide, to some degree as yet immeasurable, what kind of human beings will inhabit the earth. *It is a contemplation fraught with terror—and with hope.*"

This new manifestation of the power of inanimate particulates must be controlled for beneficence.

The fourth and fifth assertions of the sovereignty of inanimate particulates which I listed are pollutants of waters of streams and lakes, and pollutants of the atmosphere. They may well be discussed together because we can neither live nor conduct our economy without good water to drink or good air to breathe. The pollutants of both water and air are largely man-made particulates, and the control of them involves some extraordinary incursions into the fields of states rights and governmental jurisdictions. It is these aspects that I wish to discuss, rather than the aspects of deleterious effects on the health of human beings, fish and wild life. It is clear that they have much to do with the production of pulmonary cancer in man, with the instigation of respiratory diseases through smogs and smokes, and with automobile accidents and airplane crashes. In these relationships the inanimate particulate is more vociferous than the legislator.

In streams and lakes the trappings of the sovereignty of inanimate particulates are turbidities and poisonous substances from wastes from industrial plants, frothing detergents, and inhibitors of processes of water purification. In the atmosphere the paraphernalia of their sovereignty are witch-like fumes, smokes, smogs, aerosols, and irritating vapors. In the atmosphere they can destroy life in cities as in Donora, London, Liége and Los Angeles. In both water and air they can convey to human beings cancer-producing substances and a whole pharmacopoeia of materials which in small amounts acting over long periods of years may be responsible for some of the so-called degenerative diseases of the aging.

Lately these effects of inanimate particulates have become so noticeable in this country that the Congress has enacted new legislation to renovate and strengthen control measures against them, and the Public Health Service has revised its organization to give new force and direction to its work on problems of environmental health. It has established a Bureau of Environmental Health, the mission of which is "to conduct, support, and foster a comprehensive, unified approach to the multiple aspects of the physical environment as it affects human health. Through such an approach, the whole spectrum of pertinent scientific and technical specialties will be brought to bear upon the present and emerging problems in this field, including the social and economic problems of coping with environmental hazards."

Approaching the conclusion of this essay I wish to say that neither the sanitary nor the medical problems of environmental health in relation to pollution of waters and the atmosphere are the ones upon which I wish to lay emphasis. For many years I have been interested in the political and jurisdictional and governmental problems that are created by the inanimate purveyors of a multitude of troubles—particulates that have no respect for political boundaries. It has seemed to me for some time that laws of interstate transit, relationships between states in this country, and even international relationships must take into increasing consideration the suprahuman drift of radioactive fallout across all boundries. In addition, within our own country much more attention, and legislation from the center, must be given to the control of pollution of rivers and lakes and the atmosphere.

It seems to me that it is not only of interest, but also urgent to examine what is happening now and to attempt to forecast the role of the Federal Government in the future control of events. The water of the Ohio River from Pittsburgh to the Mississippi is re-used at least 100 times, with pollution compounded upon pollution. What control is exercised from State to State in the stream's course? The air-pollution of New York City blows over to New Jersey and a bi-state pollution blows back to Westchester County and Connecticut. What agency, under present jurisdictional philosophy, can control this? Nevertheless, there are hopeful evidences of appreciation of these inter-jurisdictional problems, and some arrangements to solve them. There are now some designated "air basins" in which cities yield to counties in the control of atmospheric pollution, and counties yield to states. Apparently, states may enter into treaties among themselves to attempt to control the aerial or fluminal poisoning of their citizens through the activities of neighbors. All of this tends to show that the inanimate particulates are raising penetrating questions into the governmental processes of the United States of America.

This essay is much too brief to record the powers of all inanimate particulates. Nothing has been said, for example, about the particulate chloroplasts that can be separated from living cells and still give off life-sustaining oxygen, or of the peculiar series of "quasi-particulates" of liquid helium. Enough has been said, however, to indicate the homage commanded by inanimate particulates.

Multum in parvo.

Beryllium Disease With Death From Renal Failure

Roy N. Barnett,* m.d., David S. Brown,† m.d., Conrade B. Cadorna,‡ m.d., *Norwalk*
and George P. Baker, m.d.,§ *New Haven*

Introduction

Beryllium, a light weight metal having certain industrial applications, produces granulomatous lesions involving principally the lungs but often affecting other organs.[1-4] Renal stones occur in about 10 per cent of patients so affected[2, 3] but no specific renal lesions have been described.

The following case is an example of extensive beryllium disease in which death resulted from renal failure.

Case Report

In 1941 and 1942 this 23 year old patient was an engineer in a fluorescent light bulb factory. Because his desk was located next to the area where imperfect bulbs were broken and salvaged, he was exposed to large quantities of beryllium dust. About a year after this exposure, he began having increasing exertional dyspnea, moderately productive cough, anorexia and marked weight loss. On his first Massachusetts General Hospital admission in January 1943, these symptoms, limited to his respiratory system, were first thought to be caused by Boeck's Sarcoid. He had had the usual childhood diseases; T & A in 1926; appendectomy in 1936. Past history was otherwise unremarkable and family history was significant only in that his father died with rheumatic heart disease. On this admission EKG., complete blood counts, many urinalyses, PSP, NPN, STS, serum proteins, serum chlorides, calcium and phosphorus were within normal limits and physical examination was unremarkable. No specific therapy was initiated and he was discharged to his home to continue rest.

Because of distressing gastrointestinal symptoms, anorexia, nausea, and productive cough, he was again studied at the Massachusetts General Hospital from April 21 to April 30, 1943. The history through this admission has been recorded by Dr. John Cass.[5] During this study period, berylliosis was suspected when occupational history was closely scrutinized, his chest x-ray showed the characteristic granular infiltrate, and an axillary lymph node biopsy revealed only reticular-hyperplasia. (Table I). On this admission, vital capacity of 63 per cent of normal and abnormal chest x-ray were the only positive findings. As on the previous admission, blood pressure, urinalyses, and NPN were normal, as were G.I. series, barium enema, pelvis and head x-rays, CBC, and alkaline phosphatase.

At rest at home, he slowly improved following this discharge. In July 1943 the first elevated pressure, 140/100, was recorded. He received one injection of typhoid paratyphoid vaccine in August, one in September and one in October 1943.

By January 1944, a year after he first became ill, he had regained the weight lost during his illness and had returned to normal life complaining of slight exertional dyspnea, frequent severe nose bleeds, periodic episodes of chills and fever lasting not over 24 hours, and susceptibility to minor upper respiratory infections. Moderate hypertension persisted.

In February 1945, he passed a calcium oxalate urinary calculus. Thereafter and until the time of death he passed 20-30 small calculi many of which contained beryllium.

In July 1948, his urine for the first time showed albuminuria (1+) and 4-5 WBC/HPF. Because of slight urinary hesitancy and dysuria he underwent genitourinary investigation in 1951. At that time his urine again showed albumin, but BUN, NPN, Creatinine, Serum Calcium, Uric Acid and P.S.P. were normal. Urine culture at that time showed alpha hemolytic streptococcus. Moderate hypertension, abnormal urine, polycythemia, the diffuse granular infiltrate on chest x-ray and slight limitation of respiratory excursion remained the only signs of illness from 1951 to 1955. He professed excellent health and participated vigorously in his many interests without complaint. In October 1958, a routine examination revealed blood pressure 160/120, BUN 73 mg/100 ml. chlorides 106 mEq/L, CO_2 19 mEq/L, ESR 18 mm/hr. and vital capacity 83 per cent.

He was admitted to the Norwalk Hospital for study on November 11, 1958. At the time of admission he offered no complaints. His past history was unremarkable except as recorded above and he denied childhood episodes of streptococcal infec-

---

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Table I

	URINE							BLOOD								
						CASTS										
DATE	SPECIFIC GRAVITY	ALBUMIN	RBC/HPF	WBC/HPF	CLUMPS/WBC	HYAL.	GRAN.	BUN—MGM %	NPN—MGM %	CREATININE—MGM %	HEMOGLOBIN	RBC (MILLION/CU MM.)	CALCIUM—MGM %	PHOSPHORUS—MGM %	VITAL CAPACITY—% OF NORMAL	BLOOD PRESSURE
Jan. 1943	1.020	0	0	0	0	0	0		20		16.6	5.0	11.3	3.1	63	110/70
April 1943								normal			14.5		11.7			
July 1943																140/100
July 1948	1.005	trace	0	4-5	0	0	0									
1951		+		5	+	2-3	2-3	14	53	1.2	18.7	6.4	11.5		84	
1954		3+	30-50	8-10	Freq	3-4	occ								90	140/110
1956		2+	4+	4+	4+	few	few					6.86			88	140/100
Nov. 12, 1958		4+	4+	4+	4+	few	many				15.0	4.65	8.0	6.0		130/100
Nov. 23								102	127							
Nov. 29								53	75	1.2						
Dec. 3	1.010	2+	2-5	10-15	2			39	69	5.6						
Dec. 18	1.007	2+	1-2	2-4	2	occ	2	51	71	6.0	14.0	4.81				146/98
Jan. 10, 1959	1.008	2+	4-8	5-10	1+	1-2	1-2	60	89	6.8						160/110
Jan. 29	1.007	2+	2-4	3-5	occ	occ	occ	80	100	7.0						132/82
Feb. 19									140	8.0	13.6		8.4	7.4		160/90
March 4								86	95		10.0	2.9	8.4			
April 8								102	136							
April 29								220	255		7.1	2.2				160/90

tions, rheumatic fever, nephritis or kidney disease. Initial examination showed a normal temperature, pulse 80, blood pressure 160/100, weight 148 pounds, height 70 inches. The eyes were unremarkable; the fundi showed no vascular or other changes. Head, ears, nose, throat, and mouth were within normal limits. The neck was supple and presented no abnormal masses. His lungs were clear to percussion and auscultation; the heart was not enlarged and no murmurs were heard. There was slight limitation of thoracic motion with maximum breathing effort. The abdomen was free from tenderness, distention, masses or enlarged organs. The prostate was slightly tender and boggy, producing one or two drops of prostatic juice on massage. The extremities were within normal limits, displaying good distal pulses, no edema, and no clubbing. Throughout this admission he had no new symptoms. His temperature remained normal and his blood pressure varied between 130-180 mm. systolic and 100-120 mm. diastolic. His urinary function was unremarkable except for some hesitancy in micturition early in his course and one recorded episode of hematuria. All urinary specimens showed 3-4 plus albuminuria and numerous hyaline and granular casts although the numbers of cellular elements decreased.

From this time until he died on April 30, 1959, his course was one of progressive renal failure. Routine urinalysis as well as urinary concentration tests always showed a specific gravity fixed at or near 1.010, 2-4 plus albuminuria, and on microscopic examination variable numbers of WBC, RBC, and hyaline and granular casts. Blood pressure varied between 130-180 systolic and from 100-130 diastolic. Ekg. demonstrated increasing sinus tachycardia and left ventricular enlargement and strain. Abdominal x-rays were interpreted as showing minute calcifications within the kidneys and chest x-rays as a diffuse, fine granular parenchymal scarring evenly distributed throughout both lungs fields. Cephalin flocculation, serum bilirubin, alkaline phosphatase, thymol turbidity, cholesterol, and serum proteins were normal on several determinations. Serum albumin fell terminally concurrent with limited protein intake and A/G ratio on February 19, 1959 was 3.1/0.8 Gm.

In attempting to retard or reverse the steady downhill progression into uremia which characterized his last six months, a number of measures were used. In his Norwalk Hospital admission November 11 and December 5, 1958 the symptoms of lower urinary tract inflammation were treated effectively with bethanechol chloride (Urecholine) and broad spectrum antibiotics. Theorizing that the renal failure was the result of a beryllium-induced lesion in the kidney similar to that in the lung and therefore possibly reversible with steroid therapy, prednisone 5 mg. t.i.d. was started on November 28 after he had been on limited protein intake (40 gm/day) for two weeks without significant fall in either his BUN or NPN. There followed a dramatic though transient fall in these values as indicated by the following table:

DATE	BUN (MGM %)	NPN (MGM %)	CREATININE (MGM %)
Nov. 16	Low protein diet started (40 gm/day)		
Nov. 20	81	116	7.0
Nov. 23	102	127	
Nov. 26	prednisone 5 mg. t.i.d. started		
Nov. 29	53	75	
Dec. 3	39	69	5.2

Except for brief lapses thereafter, his therapy included a variety of steriods in increasing amounts, protein restriction and rest. He was discharged home on this program December 5, 1958.

While at home there was a gradual rise in his BUN and on January 1, 1959 he passed a small calcium oxalate-beryllium stone with little discomfort and only minor transient increase in the cellular elements of his urine. Throughout the remainder of his course glycosuria was an occasional finding. Since there was no family history of diabetes and a number of fasting blood sugars were within normal limits prior to and during this time, the urinary sugar was considered a result of steroid therapy and the high carbohydrate intake.

Despite varying doses of prednisone and triamcinolone his nitrogen retention continued to increase and on January 29, 1959, BUN was 80 mg./100 ml., NPN 100 mgm/100 ml., and creatinine 7 mg./100 ml. He was admitted to the Massachusetts General Hospital on February 14. Because of a prolonged prothrombin time (45 per cent of normal) Vitamin K was administered and while he was receiving tramcinolone 4 mg. q 4 h. a Silverman needle biopsy of the left kidney was done on February 23. Bleeding time was four minutes and venous clotting time 10 minutes. He apparently tolerated the procedure well and left the hospital to return home on March 1. Urine culture on February 10 yielded a few Staphylococcus albus and rare non-hemolytic Streptococcus. Culture of the kidney biopsy needle was reported as alpha-hemolytic Streptococcus. Gross hematuria appeared on March 4 and on readmission to Norwalk Hospital his hemoglobin was 10.0 gms. Examination was essentially as it was at the time of his previous discharge except for marked tenderness over the left kidney, distended bladder, and body changes consistent with prolonged steroid therapy. Admission blood pressure was 130/90, but shock on March 4 and 5 required control with three units of blood and one unit of Expandex. Systolic blood pressure never fell below 90. Additional therapy in this admission included dexamethasone 1.5 mgm. t.i.d., chloramphenicol 500 mgm. b.i.d. Vitamin K and Vitamin C.

Increasing nitrogen retention continued after he recovered from the hemorrhagic incident and on March 6 BUN was 120 mgm/100 ml., NPN 144 mgm/100 ml., Cl 95 mEq/L, Na 134 mEq/L, K 5.0 mEq/L, and CO_2 27 mEq/L. Congestive heart failure necessitated digitalization on March 9 and he was maintained on 0.25 mg. digoxin daily. Additional therapy through this 29-day hospital course included 10 cc. gamma globulin, 37.5 gm. human serum albumin, erythromycin 250 mg. b.i.d., sulfamethoxypyridazine 1.0 gm. daily, and low protein low potassium diet. He was discharged on April 1 to continue complete bed rest, low protein low salt diet, prednisone 5 mg. t.i.d., erythromycin 250 mgm. q.i.d.

The downhill course continued at home. On April 8, his pulse was 100, blood pressure 160/100 and a faint gallop was heard over the precordium. On April 22, he presented pulmonary edema, peripheral edema, and engorged neck veins. His pulse was 130, regular; blood pressure 160/100, weight 137 pounds, and fundi within normal limits. The heart was enlarged to the anterior axillary line and presented a very marked gallop rhythm. The liver was down three fingers and there was no splenomegaly.

On April 28 he was found to be desperately dyspneic and orthopneic with only 5.0 gms. hemoglobin and 1.75 M RBC. He was admitted to the Norwalk Hospital on April 29 in a moribund state. His temperature was 98.6, pulse 120 regular, blood pressure 120/70. He was incoherent, irritable, dyspneic, cyanotic, with gasping respirations. On fundoscopic examination the nerve heads were blurred. The neck presented engorged veins which filled from below. The lungs showed a wheezing expiratory phase. The heart was enlarged; sounds were of poor quality with a very marked gallop at the apex. The pulses in all extremities were poor and there was two plus pitting edema of the feet. BUN was 230 mgm/100 ml., NPN 255 mgm/100 ml., CO_2 7.0 mEq/L, chlorides 93 mEq/L, sodium 125 mEq/L, and potassium 7.0 mEq/L. Despite therapy with oxygen and stimulants his pulmonary edema increased and he expired at 12:21 p.m. on April 30, 1959.

At autopsy (Norwalk Hospital A-59-69) he was fairly well developed and nourished. The *pericardial sac* contained about 100 cc of turbid fluid and the surfaces were covered by a shaggy fibrinous

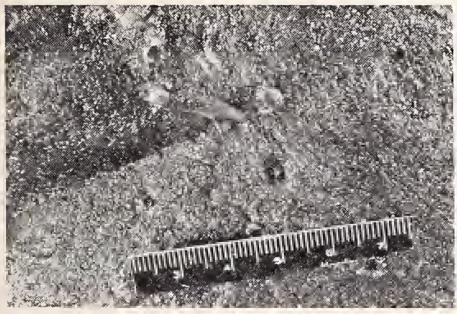

FIGURE 1
Detail of lung illustrating the myriads of tiny hard nodules.

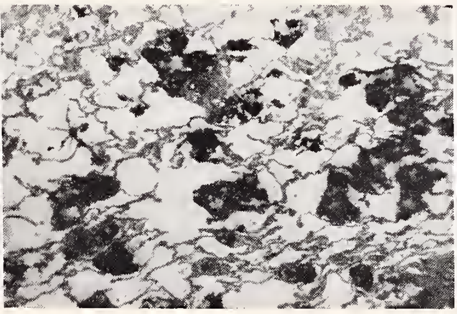

FIGURE 2
Scanning power view of lung.
Numerous calcified bodies which break out of the tissue during sectioning. Intervening alveoli intact. (X 44)

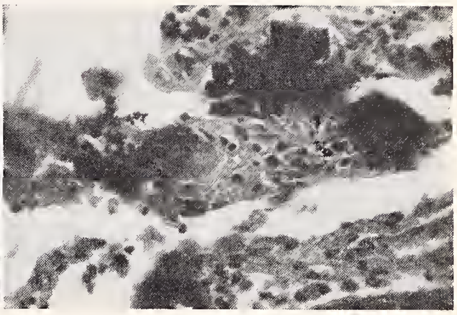

FIGURE 3
High power of Schaumann bodies.
Cloverleaf appearance; few lymphocytes; a single multinucleated giant cell. (X 560)

exudate. The *heart* was markedly enlarged and weighed 600 grams. There was hypertrophy and dilatation of both right and left ventricles. Microscopically the pericardial exudate was made up of fibrin and mononuclear cells with a few plasma cells and lymphocytes. The myocardial fibres were hypertrophied with enlarged nuclei. In one valve section there was a small area of loss of endothelium and deposition of fibrin but no leukocytes. The *right lung* weighed 710 grams and the *left* 600 grams. They collapsed but little on removal. On section (Fig. 1) there were myriads of tiny yellow grey hard nodules uually from 1 to 4 mm. in diameter, scattered diffusely through all portions of the parenchyma and imparting a sandpaper-like texture on palpation. The intervening parenchyma was generally well aerated. Microscopically (Fig. 2) these nodules represented groups of clover-leaf shaped conchoid bodies embedded in a fibrous matrix. The bodies (Fig. 3) were laminated, basophilic and gave the staining reactions of iron. There was only rarely a giant cell or a few lymphocytes to indicate any residual activity of the inflammatory reaction. The intervening parenchyma and bronchi were intact. The pulmonary arterioles were somewhat thick-walled. The *right*

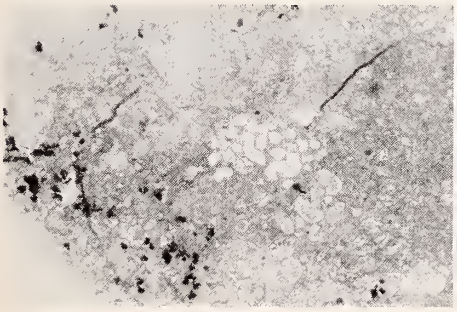

FIGURE 4
Scanning power view of kidney.
Calcific bodies in cortex chiefly; alternating obliterated and dilated tubules; distorted architecture. (X 44)

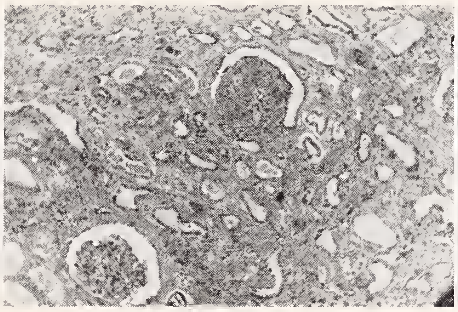

FIGURE 5
Low power view of kidneys. Scarring of interstitium;; glomerular lesions. (X 125)

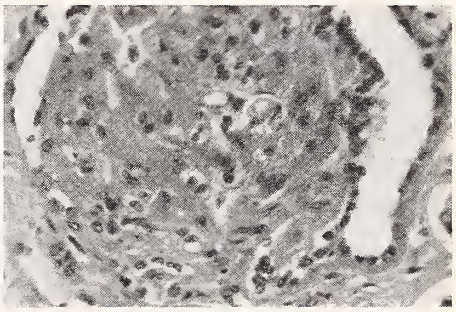

FIGURE 6
High power, glomerulus. Proliferation of epithelium; adhesion to capsule; thickening of capillary walls. (X 560)

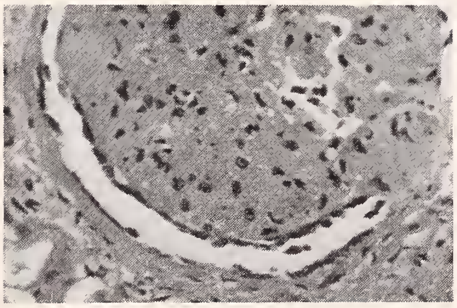

FIGURE 7
High power, glomerulus. "Glassy" appearing material throughout glomerulus; adhesion to capsule. (X 560)

kidney weighed 60 grams and the *left* 70 grams. They were entirely similar. The capsule stripped with difficulty leaving a diffusely finely granular surface. The cortex was narrowed, the cortical markings distorted and the cortico-medullary borders obscure. The arcuate arteries were prominent. There were a moderate number of tiny yellow specks about 1 mm. in diameter scattered through the parenchyma. The pelves, ureters and bladder were unremarkable; no calculi were present. Microscopically there were extensive changes of several types. (Fig. 4, 5) Most prominent was scarring of apparently pyelonephritic character extending from medulla to capsule and containing compressed tubules, lymphocytes, hyalinized glomeruli and glomeruli demonstrating periglomerular fibrosis. Some dilated tubules filled with neutrophils were present. Elsewhere were glomeruli (Fig. 6, 7) which were avascular, more or less acellular and which were filled with a pink staining, glassy material which stained P.A.S. positive and did not give the staining reactions of amyloid. Capsular adhesions were common in such glomeruli. There were almost no truly normal glomeruli. The arterioles were somewhat thick-walled with both hyaline and proliferative changes. Finally there were calcific Schaumann bodies entirely similar to those present in the lungs. They occurred singly and in small clusters with minimal surrounding fibrosis and no cellular reaction. They were present in every section, particularly in the cortex and were moderately numerous. The pelvic epithelium was intact but there were numerous submucosal lymphocytes and plasma cells. The hilar and abdominal lymph nodes contained numerous Schaumann bodies with some scarring and a few giant cells. There were no other relevant abnormalities in liver, spleen, esophagus, stomach, intestine, pancreas, prostate, skeletal muscle, brain, skin or bone.

Chemical analyses for beryllium were made through the courtesy of Dr. Harriet L. Hardy of Massachusetts General Hospital and revealed the following:

ORGANS	BERYLLIUM (MICROGRAMS/100 GMS)
Heart	.015
Liver	.09
Spleen	.10
Kidneys	.06
Lungs	7·94 (average), range from 0.26 to 18.0

Final anatomical diagnoses were:

Fibrosis and calcification in lungs, kidney and lymph nodes*, chronic pyelonephritis*, focal glomerular fibrosis*, fibrinous pericarditis**; cardiomegaly (600 grams); hypertrophy of right and left ventricles; mitral valve thromboendocarditis (microscopic); congestion of viscera.

Discussion

There is no question that extensive beryllium disease was present at autopsy and a review of the history discloses that he falls into the relatively small group of patients described by Hall et al.[2] in which patients pass through both an acute and a chronic phase. The conchoid bodies in the lungs with surrounding fibrosis are not histologically specific for berylliosis but in the present case their association with the clearcut history of exposure and the high beryllium content of the tissue clearly indicates that they are beryllium granulomata. Though the tissue beryllium level in the kidney was less than one per cent of that in the lung the patient did pass beryllium-containing stones and it should be noted that involvement of organs other than the lung often shows poor correlation with reported tissue beryllium levels.[3] The striking similarity between the pulmonary conchoid bodies and those found in the mesenteric lymph nodes and kidneys makes it reasonably certain that the conchoid bodies found in the kidney were also secondary to berylliosis.

Were the diffuse renal changes present at autopsy due to an indirect effect of beryllium mediated through a calculous pyelonephritis, an incidental finding resulting from some unrelated renal disease process or a direct toxic effect of beryllium on the glomeruli?

Anatomically it appears that at least 60 per cent of the renal histologic changes were due to chronic pyelonephritis which might be expected in light of the long history of passage of stones. It should be pointed out that renal calculi are unusually prevalent in patients with chronic beryllium disease.[2, 3] This is apparently secondary to the hypercalcuria which is seen in such patients. The hypercalcuria cannot be attributed to osteoporosis or the effect of steroids.[3] On the contrary, steroids are reported[3] to decrease the hypercalcuria and presumably the incidence of stones. Thus the pyelonephritic changes seen at autopsy are at least indirectly related to the patient's chronic beryllium disease.

Of interest are the findings of unique eosinophilic staining, amyloid negative deposits in the remaining 40 per cent of diseased glomeruli. In the Beryllium Registry of the Massachusetts General Hospital we found one other case which showed renal conchoid bodies but on reviewing the slides (Reg. No. 466) we did not find glomerular lesions similar to those described in the present case. These glomerular changes superficially resemble those seen in membranous glomerulonephritis. The clinical picture was not that usually seen with membranous glomerulonephritis, i.e. the nephrotic syndrome and little hypertension. Also against a diagnosis of glomerulonephritis is the absence of any history of preceding streptococcal disease and the onset of hypertension prior to any abnormal urinary findings. Essential hypertension is excluded by the age at onset (24 years), the lack of family history and the relatively minor renal vascular changes at autopsy.

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* History of beryllium intoxication in 1942.

** Clinically uremia.

The final possibility is that of direct injury to the glomeruli by beryllium. It should be noted that the patient had the sudden onset of hypertension only six months after his initial acute symptoms. Such an elevation of blood pressure might be expected if glomerular changes had been occurring at that time. Although there is no available data it is possible that these unique glomerular changes might lead to hypertension without concurrent obvious urinary changes. The striking albeit transient improvement in renal function during his third hospitalization was concurrent with the use of corticosteroids. This improvement was apparently not related to changes in diet or general management but rather was temporally related to the use of these agents which have been shown to produce marked improvement in pulmonary function in patients with beryllium disease.[3]

Though the data from this case are inconclusive they suggest that there may well be a place for corticosteroid therapy in patients with chronic beryllium disease with renal complications in an attempt to decrease the hypercalcuria and renal calculi and possibly modify a specific glomerular lesion.

Summary

A case of chronic beryllium disease is reported in which the patient eventually succumbed to renal failure which had progressed in spite of stabilized cardiopulmonary function. The 16 year course of his disease was associated with the early onset of hypertension and the passage of numerous calculi.

Pathological examination disclosed changes of chronic pyelonephritis and an apparently unique glomerular lesion. Further studies of "survivors" of acute and chronic beryllium disease may answer questions raised by this case.

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Human Genetics—The Next Big Step Forward In Medicine

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Chicago, Illinois

In 1906, when in San Francisco I was an intern, and Dr. Blumer was helping me in my efforts to become an internist, medicine had come pretty much to the end of an era—the era of great bacteriologic discoveries. In 1895, when my father, Dr. Luis F. Alvarez, was a graduate student in Bacteriology at the Johns Hopkins Medical School, Dr. Blumer was working with William Welch and Simon Flexner—men who had had a part in the great bacteriologic era, and whose names are still attached to some of the common bacteria.

In 1906, we physicians were well started on a new phase of medicine in which extracts of parts of plants were giving way to the synthetic "coal tars." A while later came Kendall's thyroxin; Banting and Best's insulin; and Allen and Doisy's ovarian extract, and with these discoveries, the science of endocrinology was born. Along the way came radium and powerful x-rays. About 1900 the Mayo's and others ushered in the period of abdominal surgery with what some called "the pathology of the living"—the discovery that many a "stomachache" was due to a gallstone, an ulcer, or a pancreatitis. Also, with the work of Wendell Stanley, came the great science of virology.

All along the way, tremendous advances were being made in the science of modern pharmacology—advances crowned by the discovery of drugs such as atropine, quinine, and cocaine, and, later, salvarsan, sulfonamides, penicillin and similar antibiotics; cortico-steroids, antihistaminics; and now, the many drugs which either calm or stimulate the brain.

The point I want to make is that in the last 60 years, we physicians have watched the coming of one new stage of medicine after another.

It looks now as if the study of genetics would be one of the next steps forward. I agree with the deans of our medical schools who were recently reported as saying that the next big stage in medicine is likely to be one in which genetics will be in the forefront. This stage is long overdue. For years, it has been held back by a strong taboo against even a mention of the enormous amount of work on the inheritance of psychoses done by geneticists and some psychiatrists, such as Franz Kallmann and his group at Columbia University. All one has to do to make many men "fighting mad" is just to mention the Kallikaks and the Jukes!

Last year Dr. Hsia reported in the New England Journal of Medicine half a hundred "inborn errors of metabolism," and now every few months one can read of new ones that have been recognized. In the last five years great advances have been made in the understanding of some of the sexual mix-ups and confusions that distress many persons.

In just the last two years, geneticists have found that mongoloid children usually have 47 instead of the normal 46 chromosomes. Also, it is now known that a man with 48 chromosomes can have Klinefelter's feminizing syndrome; while a person with 46 chromosomes can have Turner's syndrome—also with a sexual defect. A mongoloid child with 46 chromosomes was found to have a father with 47 chromosomes. In the last few years a new science of chromosomal morphology has appeared, with a new terminology of strange words. Now, men are studying how and why, in certain persons, some chromosomes—and especially the sexual ones—change their shapes, their numbers, and their ways of doubling up.

What will be the uses of this new science? Some persons may now be asking, "But what is the practical good of all this study of genetics and chromosomes and inherited diseases? In what way does this study concern the general practitioner, the internist, the neurologist, the psychiatrist, and all other specialists? It should already be of great concern to many physicians and all thoughtful laymen, economists, and men concerned with the future progress of the human race.

Let us take the case of diabetes. In 1906, when Dr. Blumer was with us in San Francisco, the boys and girls we saw with diabetes all died, usually within six months. Because of this early mortality, these children could never grow up and marry and bring into the world more youngsters with severe diabetes. But today, with insulin, we are keeping practically all of these children alive, and hence they are marrying and having children.

As Dr. Krall of the Joslin Clinic said recently, if two of these diabetic young people marry and have four children, all four can be diabetic, or potentially diabetic. One or two of them may be just carriers who have no sugar in their urine, but if one of these carriers has four children by another apparently healthy carrier, he can have four diabetic or potentially diabetic children. Now some men are wondering what will happen when the world is flooded with diabetics. The highly intelligent ones will, of course, take care of themselves, but the ignorant ones can easily become public charges. This sort of thing is beginning to worry social service people.

Let us look at one more of the many possible examples of a disease which can increase in frequency if, with the help of new drugs, we can enable many of the victims to marry and raise a large family—let us take epilepsy. I just saw a lad in college who, with the help of Dilantin, is going to marry his girl. Without an anticonvulsive, he would probably have to stay single. Naturally, I dread the possible results of such a marriage.

Recently, I saw an example of what can happen. A handsome young man with an epileptic uncle, when he wanted to marry, was told that he should at least choose a girl from a good stock; but he didn't. He married a pretty girl from a family afflicted with insanity. One can only guess that a poor gene from the girl's family re-enforced a poor gene supplied by the man; at any rate, their first child is an epileptic idiot.

Every week now I get a number of anxious letters from people like the woman who just wrote to say, "I am an epileptic with three children. My father-in-law comes from a tribe of alcoholics, and this may account for the fact that my husband is unstable. We have three children, and I greatly fear that one of the boys is an epileptic. He has never had a seizure but he has a violent and unreasonable temper; he is cruel; he beats up small boys, and he refuses to accept discipline at home or at school. My family doctor says, 'He'll outgrow it,' but I fear that, with the passage of years, he will only get worse and more dangerous to society. What can I do?"

Unfortunately, as yet, only a few of us physicians have learned the great value of electroencephalograms in understanding the nature of the illness of such a boy. Actually, the several men who recently have studied such lads have reported that two in three had a dysrhythmic EEG. Some of them have been much helped by anticonvulsive drugs.

Minor equivalents of disease. Shortly after Dr. Blumer went East, I went for a while into general practice, and naturally got to know well many families. Soon I was impressed by the fact that when I was asked to see a mentally retarded or epileptic or hysterical child I might not be able to find among his relatives another person afflicted in exactly the same way, but I almost always found some one with signs of a brain disturbance, such as a psychosis, great eccentricity, a violent temper, alcoholism, vagabondage, or criminality. Then, as I read the great Sir Francis Galton's books on human inheritance, I found him saying, "The disease A in the parent does not necessarily appear, even when inherited, as A in the children." How true I have found this to be!

On my return to San Francisco, in 1910, I soon became acquainted with five families, all of whom taught me much and started me on a life-time of study. The first man I saw had terrible headaches. Because he was a red-faced, sullen-looking, and asocial man who reminded me of some degenerated epileptics I had seen, I asked him about his family, and found that in the State colony, he had a brother who was having several convulsive seizures a day. I gave him the then-available bromides, and on this medication he was almost "cured." I concluded that he must be a carrier of epilepsy who never had had a seizure.

Next, I saw a mildly psychotic woman who came to consult me about her mentally retarded girl. She said she had seven big handsome brothers and a beautiful and brilliant, but asexual and unmarried, sister. One of the brothers was a dipsomaniac. The father was a distinguished jurist. I sent for the able sister and asked, "Where did these mental and nervous troubles come from?" And she said, "Father's stock is far from perfect; he has a brother who is a town-drunk type of character! We pay a man to keep him out of sight on a mountain ranch."

The next family I met in a similar way. A mildly depressed woman brought me her daughter who was not developing mentally as she should. Soon I found that a sister of the woman was a fat, mentally retarded, hypothyroid person; another sister lived in a mental hospital, and a brother was so unstable he had made a mess of his life. The father of these people was able and distinguished but very reserved.

The fourth patient who interested me much got me to thinking again about carriers. He came because of a pernicious anemia. Shortly afterward, he brought me his brother's son with leukemia. The brother seemed normal. Later, when I saw a family with practically the same story, I suspected all the more that the apparently healthy parent of the lad with leukemia must be a carrier of a tendency to some injury to the blood-forming organs. This injury did not always have to produce the same disease.

The fifth case got me started on years of study of persons born to be frail. A tall, thin, nervous, sickly lad of 19 had a marked constitutional inadequacy with "the habit of illness." What interested me much was that his sister who was thin and frail like him, for a time was insane. Since then, I have seen dozens of similar cases in which there was this family association of psychosis with either constitutional inadequacy, or what I have called "Charles Darwin's Asthenia." Back of Darwin, on both sides of his family, was a decided tendency to depression (Alvarez, 1959).

Although in the years from 1915 to 1940 my interests were centered largely in gastroenterology, I kept making notes about scores of interesting families I saw in which a tendency to psychosis, alcoholism, or epilepsy came down through three or four generations, usually affecting some members one way and other members in another way. Although I noted a tendency for depressions to run in certain families and schizophrenia to run in others, I saw a number of families in which there were depressions in members of one generation and definite schizophrenia in members of another generation. I found that alcoholism tends to keep showing up in some psychotic families, while in other families it is the alcoholism that predominates.

When I started on my research I thought that I could divide my afflicted families into the psychotic and the epileptic, but later I learned that there was epilepsy in at least 14 per cent of my psychotic and alcoholic families, and there was psychosis and alcoholism in a high percentage of my epileptic families. Hence, all I could say was that in some psychotic families epilepsy seemed to be an occasional happening, while in other families the curse was primarily and predominantly an epileptic one.

I found a few families in which a tendency to suicide was a common trait. For instance, an able man who always seemed to me to be well-adjusted, died by his own hand. His brilliant sister who twice spent time in a mental hospital, took her own life. Although in many ways a fine woman, she was eccentric and somewhat amoral. Another sister went insane and committed suicide. A third sister was peculiar and dropped out of sight. Both the mother and the father of these people committed suicide. A son of the suicide I first mentioned was a good-for-nothing.

The minor equivalents of psychosis. About 1940, I had some spare time, and so I went more actively to work on these problems, and before long I had made abstracts of the records of three or four generations of nearly 700 families. I became particularly interested in studying the minor equivalents or microsymptoms of psychosis and alcoholism, in one group, and of epilepsy in another group.

In 1958 I published a book showing what had actually happened in a medical way to 574 people who had psychotic and alcoholic relatives, and what had happened to 99 more persons who had mainly epileptic relatives. See Practical Leads to Puzzling Diagnoses: Neuroses that run through Families (Lippincott).

My impression became strong that many of the symptoms that bothered these people were minor equivalents of the more serious troubles that afflicted some of their forebears. Usually, I could not prove this because I did not have enough cases, but often I could not help wondering if there might be some significance in such a fact as that the two patients I saw with a neuro-fibromatosis had epileptic sibs, or in the fact that every one of the few persons I saw with the hereditary type of hunchback had epileptic relatives. I suspected it meant something when I found a high percentage of the female "relatives of the psychotic" sexually frigid, and many others dyspareunic; and I was satisfied it was significant when I found that almost every man I saw with a markedly premature ejaculation was a tremendously irritable relative of epileptics. Observations of this type need now to be followed up with many another case—to see if they *are* significant. We need, also, to approach the problem in another way—beginning, let us say, with 100 dyspareunic women as probands, to see what percentage have psychotic relatives.

Symptoms complained of by relatives of the psychotic and alcoholic. (I studied the relatives of the psychotic and alcoholic together because, so far as I could determine in a preliminary study, there wasn't much difference between them). Among these "relatives" there were 37 per cent who suffered from occasional depressions, "blue spells," "crying jags," "quiet spells," distressing feelings of morning fatigue, spells of great exhaustion, or feelings of toxicity.

Remarkable was the fact that 37 per cent of 324 women "relatives" suffered from a hysterical type of non-gaseous bloating of the abdomen—due apparently to contractions of the muscles at the back of the abdominal wall (Alvarez, 1949).

At least 35 per cent of all of the men and women "relatives" complained of great nervousness, and 31 per cent were unstable or poorly adjusted. Many were so obviously eccentric that, when they came into the office, they were labeled as "screwballs" by my receptionists. Thirty per cent were full of fears and anxieties. Ten per cent were full of fears of going insane, and 25 per cent had attacks of diarrhea which they said were due to panics of fear that they were about to lose their minds—as did some of their forebears. At least five per cent were hypochondriacs who were sure they had heart disease or cancer.

Some of the relatives of schizophrenics had never held a job; and some of the men had never had anything to do with a woman. These people often complained of weird sensations, such as blood dripping in their chest, wind blowing through their skulls, or worms crawling under their skin. Many felt tense, and many complained of a lack of a good sense of balance. Many said they felt as if they could fly to pieces. Some complained of numbness here or there. Others were terribly apprehensive, or they went into weird "tizzies," in which their autonomic nerves played tricks with their several body organs.

Twenty-two per cent of the 324 women "relatives" failed to marry, and quite a few who married had been divorced. Many, particularly of the schizoid men and women were "touch-me-not" asexuals who could not love anyone. Several had been married for years without having sexual intercourse. It is not surprising that a trace of psychosis in a person should make it impossible for him or her either to love or to love unselfishly and acceptably, without a paranoiac type of jealousy or an epileptic type of temper.

As one would expect, 21 per cent of the relatives were bad worriers. All clinicians would do well to remember that 18 per cent of these "relatives" sought medical help primarily because of pain, for which no cause could be found. Many of those who had their pain in the abdomen had been operated on a number of times.

Several of the "relatives" said that for years they had vomited their breakfast. Fifteen per cent complained of nausea. Definite epilepsy was discovered in 14 per cent. At least 13 per cent of the relatives were constitutionally inadequate. After World War I, it was found that some 87 per cent of the soldiers suffering from neurocirculatory asthenia, or "soldiers' heart" were "relatives." Twelve per cent of the women complained of urinary distresses of a usually nervous type. At least 10 per cent of the "relatives" were schizoid and nine per cent were cyclothymic.

Relatives of the epileptic. Among the 99 relatives of epileptics the incidence of many neurotic syndromes was about the same as it was among the relatives of the psychotic and alcoholic, but there were some decided differences. What interested me most was that the incidence of irritability, irascibility, and a violent and sometimes dangerous temper was nearly three times greater among the relatives of the epileptic. Twice as many relatives of the epileptic were alcoholic (as compared with relatives of the psyhotic and alcoholic).

Highly noteworthy was the fact that 29 per cent of the relatives of the epileptic said that they had suffered from episodes of depression. This marked tendency of the relatives of epileptics to suffer from psychotic episodes has not been mentioned even in large treatises on epilepsy. Only a few writers have emphasized the frequency with which epileptics are found to have had brief psychotic episodes. For instance, a lad who cracked up a bit nervously in college and had to go home was looked on by the University psychiatrists and by me as the usual schizoid. But when I found he had the violent temperament of an epileptic, and when I learned of an epileptic ancestry, I had electroencephalograms made, and found a typical dysrhythmia. Put on anticonvulsives the lad felt so much calmer he was able to hold a job.

Worth noting, because it is not generally known, is the fact that in the practice of an internist he sees many epileptics, but rarely one who has seizures. Years ago, Stanley Cobb and Dr. and Mrs. Frederic Gibbs pointed out that only one in 10 or 25 of the persons who have an epileptic type of E.E.G. ever has an attack of grand mal. Most of the epileptics I see complain only of nervous distresses, perhaps "tizzies," or autonomic "storms," violent headaches, horrible nightmares, curious brief spells of stabbing abdominal pain, spells of dizziness, occasional spells of depression or mania, occasional spells of acute alcoholism; perhaps difficulty in holding a job—due to clashes with fellow workers; perhaps fears of attacking and killing someone, and, among the men, premature ejaculation. As I was writing this, one seizureless epileptic young man in my office told me of always, since childhood, having had strong impulses to kill someone, even the girl with whom he was in love; another such man said that always, when he got into a fight with someone, as he liked to do, bystanders had to pull him off the fellow.

A question I have found very useful in identifying these carriers of epilepsy is, "Would you dare spank a child?" and always the answer is, "Absolutely not; I might not be able to quit." A question directed to the man's wife or sibs commonly reveals the fact that he has a violent and perhaps dangerous temper. To illustrate: a woman who had just married a seizureless epileptic told me that for no reason she could see, her husband had thrown her down a flight of stairs. He confessed to me that he had had sudden impulses to hurt his bride, but he could not remember the offense he had committed.

These people are often stubborn; they never apologize for having hurt someone, and they never say they are sorry. Many live alone because "it is too much trouble to get along with others." One in 10 says that if he takes a few drinks he is a dangerous "wild man." Many say they have always suffered from terrible nightmares. If asked, some will admit that occasionally a constant sound, like that from an electric fan, seems to quit for a second, indicating a momentary shut-off in consciousness resembling that of petit mal. A few have psychomotor seizures in which they make chewing movements, or rub one eye, and fail to answer questions.

Summary

In the last 100 years Medicine has gone through several stages—each marking a great advance. It now looks as if one of the next stages will be one in which the many hereditary diseases of man will be studied, and a particular search will be made for the minor equivalents of these inherited diseases—the puzzling equivalents which are likely to appear in some of the relatives. Greater and greater efforts will be made to find tests that will enable physicians to recognize early in life the millions of carriers, some of whom will develop their disease in their later years.

Already, hundreds of epileptics and diabetics and other people afflicted with some hereditary disease of the nervous system or the muscles is asking, "Which of my children is going to get the disease?" Others who know that they are carriers of a disease want to avoid marrying another carrier of the same, or a related disease. They do not want to bring children into the world if even one of the youngsters is going to have a big chance of living a life of suffering.

By studying heredity, many more relations between certain diseases, such as leukemia and mongolism, and acute leukemia and diabetes will be found.

The science of genetics is developing rapidly, and a number of conditions are now known to be associated with an abnormal chromosome count.

Great light could be thrown on the nature of psychoses, neuroses, alcoholism and certain forms of mental retardation by further study of the ways in which these diseases come down through a family, attacking one generation after another. As Sir Francis Galton said, these conditions do not always breed true. In a big family one can find neurotics, psychotics, alcoholics, epileptics and morons.

Unfortunately, during the last half-century there has been a powerful taboo against anyone's even recording the bad heredity of a person with a psychosis. Now, there are signs that the science of genetics is bursting its bonds; the students of this subject are getting free, and soon their work must have a tremendous influence on the development of thought in a certain field of medicine. Great advances will be made in the recognition and understanding of many inborn defects in metabolism, and many symptoms and syndromes now ascribed to mental trauma in childhood, will be seen to be minor equivalents of the psychosis or epilepsy that has appeared here and there in the person's ancestry.

ANNOUNCEMENT
DATE LISTING SERVICE

Realizing that all too often the number of members who attend meetings of medical organizations is disappointingly small and that, in part at least, this curtailment of attendance is frequently brought about by one or more conflicts with other meetings, the Society's office is instituting a minor but potentially important service for the use of all legitimate medical organizations who may wish to avoid such conflicts.

Starting now, any group may notify this office of the time, place, and date on which it plans to hold a meeting. The information will be recorded and, if time permits, published in *Connecticut Medicine.* In addition, this knowledge will enable us to advise inquiring program chairmen as to the nature and dates of meetings already scheduled and allow them to determine whether or not those meetings will adversely affect their own or vice versa. It stands to reason that early listings will increase the efficiency of the plan.

This will be strictly a date clearance service; *not a date booking bureau.* The Society obviously has no prerogative to set or change dates for any meetings but its own. Those interested in utilizing this service may write to the Connecticut State Medical Society, 160 St. Ronan St., New Haven 11, Connecticut or call New Haven, UN 5-0587.

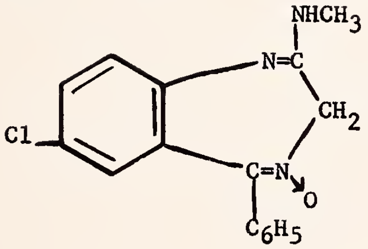
A Clinical Study Of Chlorpromazine And Chlordiazepoxide*

MARSHALL E. SMITH, M.D.**

In the treatment of chronic schizophrenics in a state hospital setting, chlorpromazine had been employed with almost routine regularity as part of the total hospital program. When chlordiazepoxide became available for investigational use, we became interested in comparing it with the phenothiazines in a mental hospital population.

In the laboratory it was demonstrated[1] that chlordiazepoxide had a calming effect on the usual laboratory animals such as mice, rats, cats and dogs, and a unique taming effect on vicious or agitated monkeys. While having the tranquilizing properties of chlorpromazine and reserpine in animals, the drug lacks their characteristic autonomic blocking effects. Furthermore, it is more potent than meprobamate in its muscle relaxant properties.

Chemically, chlordiazepoxide is a member of the benzodiazepine group of compounds, with the following structural formula:



Because of the laboratory findings which demonstrated the tranquilizing ability of the drug and its apparent lack of severe toxic reactions this clinical study was undertaken. The study was designed to be conducted in three phases, if possible:

1) An initial study
2) A blind comparison with chlorpromazine
3) Pending the outcome of the first two phases, an extended trial of the test drug in a broader population.

Phase I—Pilot Study

The pilot study was undertaken with ten chronic schizophrenics, five males and five females. All patients were between 38 and 57 years of age, who had been hospitalized for at least four years, the maximum hospitalization being 17 years. The initial dosage employed was 25 mg. three times a day, this being increased gradually to 50 mg. three times a day, except in two cases where the dosage was increased to 100 mg. three times a day. Our pilot study lasted for three weeks. During this study it was our clinical impression that the drug demonstrated a calming effect, with a lessening of anxiety in these patients. Because of the reduction in anxiety there was less agitation and acting out behavior. Patients appeared friendlier, related better to other patients and personnel, participated in more ward activities, but did not show any great change in their psychosis. There was no clinical evidence of toxicity or side effects.

An evaluation comparing chlordiazepoxide, chlorpromazine, and placebo in a blind fashion was then undertaken.

Phase II—Blind Comparison Study

PATIENT SELECTION AND METHODS

Forty-five patients housed on our research unit, which consists of two wards, one having 50 male, and the other 50 female patients, were selected for our study. These 45 patients were divided into three matched groups on the basis of age, duration of illness and predominant symptomatology (Table I). Both groups were comprised of males and fe-

TABLE I

DISTRIBUTION OF 41 PATIENTS IN DOUBLE-BLIND STUDY GROUP

CLINICAL SAMPLE	PLACEBO (A)	CHLORPROMAZINE (B)	CHLORDIAZEPOXIDE (C)
No. patients	15	13	13
Diagnosis	13 schizo. (chronic) 2 manic depressive	11 schizo. (chronic) 2 manic depressive	13 schizo.
Age (average yrs.)	39.93	44.53	37.69
Sex	5 M & 10 F	7 M & 6 F	5 M & 8 F
Hospitalization (average length yrs.)	10.06	14.53	13.23
Dosage—(daily)	—	150-600 mg.	150-700 mg.

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* *Librium, supplied by Hoffmann-La Roche Inc., Nutley, New Jersey.*

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males, although sex was not considered as significant as the three variables upon which the selection was made. The three groups labeled A, B, and C, each had 15 patients. Two patients from groups B and C were part of the study for less than one month and their findings and results are not included in our evaluation. They were taken out of the evaluation because of physical illness (two cases) and transference to another ward (two cases).

The medication used during the study was prepared in identical capsules—Group A was placebo, Group B, chlorpromazine (50 mg./capsule) and Group C, chlordiazepoxide (50 mg./capsule). Neither the patients nor the attending physicians knew what medication was being given. An identifying code was available but was not broken until the end of the study.

Group A: The placebo group consisted of 15 patients, five male and 10 female. Thirteen of this group were chronic schizophrenics, and two had been diagnosed as manic-depressive reaction. Their average age was 39.93 years. The average length of their hospitalization was 10.06 years, two hospitalized three years or less, eight had been hospitalized from four to ten years and five had been hospitalized over ten years.

Group B: The chlorpromazine group consisted of 13 patients, seven male and six female. Eleven of this group were chronic schizophrenics and two were manic-depressive psychotics. Their average age was 44.53 years, and average length of hospitalization 14.53 years. Five had been hospitalized from six to 10 years, and the remaining seven had been hospitalized over 10 years, the longest being 30 years.

Group C: The chlordiazepoxide group consisted of 13 patients, five male and eight female. All of this group were chronic schizophrenics, with an average age of 37.69 years. Average length of hospitalization was 13.23 years. Two (2) of the group had been hospitalized for three years, two for six to eight years, and the remainder for over 10 years, the longest being 25 years.

All patients were started with one capsule of the particular medication A, B or C three times a day. This was increased by one capsule (50 mg. of active material) every three days, until a total of 600 mg. to 700 mg. per day of either chlorpromazine or chlordiazepoxide was reached. The dose of the placebo was similarly increased.

The medication was increased until an adequate therapeutic result was obtained, unless there was evidence of side effects. The duration of the study was 14 weeks.

No change was made in the total hospital treatment program which consisted of occupational therapy, group therapy, and the general milieu of a hospital regimen.

Patients were evaluated on the basis of a rating behavior scale, routinely used as a measure of effectiveness of a therapeutic program for this type of patient. In addition, the general impression by physician, nurses and aides of clinical improvement was recorded. Routine laboratory studies, consisting of CBC, urinalysis, cholesterol and cholesterol ester, thymol turbidity, cephalin flocculation and A/G ratio, were performed at two week intervals throughout the course of the study.

Changes in the patients were categorized as follows: "maximal improvement" – complete disappearance of predominant symptomatology and ability to participate in the hospital treatment program; "moderate improvement"—partial disappearance of predominant psychotic symptoms, change in behavior, and ability to engage partially in treatment activities; "minimal improvement"—no change in symptoms and only a partial change in behavior; "no change" and "worsening"—psychotic symptomatology became more apparent and behavior more uncontrolled.

Results

The placebo group showed no favorable response to the medication administered. In this group five or 33.3 per cent showed no change; 66.7 per cent or 10 patients became worse on the medication (Fig. I).

The chlorpromazine group had a moderate response in one or 7.7 per cent; no change in eight or 61.5 per cent and a worsening of their condition in 30.7 per cent or four patients (Fig. I).

The chlordiazepoxide group had a maximal response in 7.7 per cent (one patient); a moderate

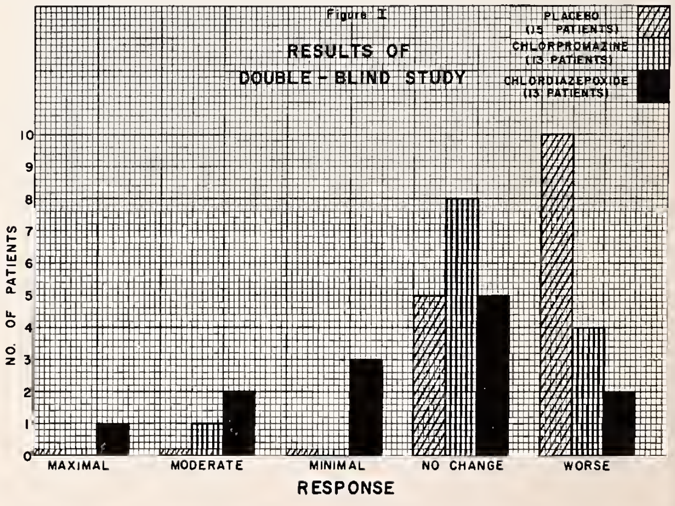

FIGURE I

response in 15.4 per cent (two patients); a minimal response in 23 per cent (three patients); no change in 38.5 per cent (five patients); and a worsening of their condition in 15.4 per cent (two patients) (Fig. I).

Side effects noted in the chlorpromazine group were as follows: extrapyramidal stimulation in four of the 13 at a dosage level above 400 mg. per day, ataxia in three of the 13 patients at a dosage level above 400 mg. per day (Fig. II).

In the chlordiazepoxide group extrapyramidal stimulation was seen in four of the 13 patients at a dosage level above 600 mg./day, ataxia in two of the 13 patients at a dosage level above 600 mg./day, and hypermotor activity in two of the 13 patients at a dosage level of 150 mg./day (Fig. II).

No evidence of toxicity to the liver, blood and kidney was observed.

Phase III—Clinical Use Of Chlordiazepoxide In A Mixed Psychiatric Population

After the completion of the controlled study, 143 patients including 87 chronic schizophrenics, 31 acute psychotics and 25 psychoneurotics were treated with chlordiazepoxide. The duration of treatment ranged from 12-20 weeks with the patients being followed for as long as eight months. Using the same criteria for evaluation as in the blind study, similarly impressive results were observed (Table II). Varying degrees of improvement were shown in 65 of the schizophrenics (74.7 per cent) and 17 (54.8 per cent) of the acute psychotics. In seven of the 11 patients with anxiety reactions a good response was observed permitting these patients to enter into psychotherapy. A marked response was noted in three of six obsessive-compulsives and a good response in three of six

Table II

Results of Therapy with Chlordiazepoxide in a Mixed Psychiatric Population

DIAGNOSIS	NO. OF PATIENTS	AGE	DAILY DOSE (MG.)		RESPONSE		SIDE EFFECTS
			RANGE	AVERAGE			
Group I							
Chronic Schizophrenics	87 51 M & 36 F	24-56	150-600	375	Maximal	4	Ataxia 9* (10.3%)
					Moderate	23	Extrapyramidal Stimulation 7† (8.1%)
					Minimal	38	
					None	11	Hypermotor activity 6‡ (6.9%)
					Worse	11	
						— 87	
Group II							
Acute Psychotic Reactions (schizophrenics—29; manic depressive, hypomanic—2)	31 21 F & 10 M	19-41	150-600	300	Maximal	2	Ataxia and extrapyramidal symptoms 3 (9.7%)
					Moderate	7	
					Minimal	8	
					None	5	
					Worse	9	
						— 31	
Group III							
Psychoneurotic Disorders	25						
Anxiety reaction	11 (8F & 3M)	15-49	75-400	175	Good	7	
					Very little	4	
Obsessive—compulsion reaction	6 (3F & 3M)	22-37	75-325	125	Marked	3	
					None	3	
Neurotic depression reaction	6 (5F & 1M)	29-51	75-350		Good	3	
					Little or none	3	
Gastrointestinal reaction	2 (1F & 1M)	32-51	100-150	125	Asymptomatic	2	
						— 25	
Total	143						

* at 200 mg. daily in 2 patients, >350 mg. daily in 7 patients.

† at a dosage level of 400 mg. daily.

‡ at a dosage level of 150 mg. daily in 1 patient, >250 mg. daily in 5 patients (decreased in 72 hours by halving the dose).

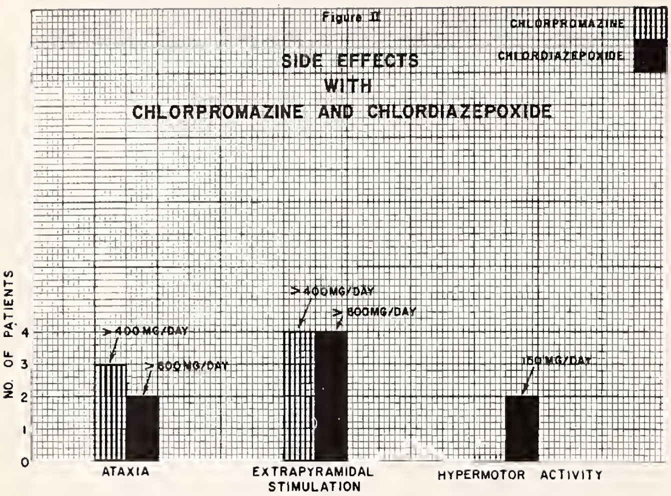

Figure II

patients suffering from a neurotic depression reaction. These latter three patients had a large amount of anxiety and agitation coupled with their depression while the three who did not respond did not initially demonstrate a great deal of tension and anxiety. In two cases of psychophysiologic gastrointestinal disturbance the patients became asymptomatic after one and five weeks of therapy respectively, and have remained asymptomatic for five and eight months following discontinuation.

The side effects observed were similar to those of the comparative study. However, as our experience with the drug broadened, it was found that the ataxia, extrapyramidal stimulation and hypermotor activity occurred at doses ranging from 250 mg. to 400 mg. per day. When the dose was cut in half the hypermotor activity decreased in 72 hours in all cases.

Discussion

From the pilot study some tentative findings emerged: the dosage range over which the drug was effective varied widely with the individual patient; the onset of action was dramatically rapid, reduced agitation occurring often within hours; the absence of disturbing side reactions gave us the confidence to push the dosage to the point of therapeutic effect. Although it should be noted that the dosages employed were considerably higher than those used by earlier investigators.

In setting up the next phase of the study, no single definitive dose could be mechanically prescribed for all patients. Unless side effects intervened, the dose was increased in each patient until the therapeutic level was reached, regardless of which medication—A, B or C—was given. In some patients, this level was reached with 150 mg. daily and in others not even at the maximum 700 mg. daily. The blind, comparative study confirmed the observation in the pilot study of the wide variation in dosage requirement by the patients under study.

Despite the fact that the patients were not deliberately selected on the basis of sex, the distribution in the two groups receiving the active drugs was approximately equal, and certainly not significantly different. With respect to the other variables: age, duration of illness and predominant symptomatology, they were remarkably well matched. Thus, for instance, the schizophrenic patients were all of the chronically disturbed agitated type. In evaluating the results this fact is significant, since chlordiazepoxide, like chlorpromazine, was tested for its effect on agitation and anxiety tension as the target symptoms, as well as on the general behavior score. In this respect, chlordiazepoxide proved to be the more effective drug (Fig. I). Although extrapyramidal stimulation and ataxia occurred with both medications, the latter was less frequent with chlordiazepoxide, and both occurred at lower doses with chlorpromazine. Hypermotor activity was noted in two patients receiving chlordiazepoxide (150 mg. per day) an effect which remains unexplained. (Fig. II).

The results obtained in the uncontrolled series, in general, bear out the observations made in the comparison group both as regards the effect on the target symptoms and on the general behavior of a severely disturbed group of patients. The chief value of the chlordiazepoxide is that its calming effect renders the psychotic patient more amenable to intensive psychotherapeutic treatment, and more accepting of the hospital regimen.

Summary

Following a pilot study in which the calming effect and safety of chlordiazepoxide was established, a comparative blind evaluation employing placebo, chlorpromazine and chlordiazepoxide was undertaken. The patients (predominately chronic schizophrenics) were matched on the basis of age, duration of illness and predominant symptomatology. The duration of study was 14 weeks. The dosage ranged from 150 mg. to 700 mg. per day of each drug. The response to therapy was evaluated by use of a behavioral rating scale in combination with the clinical observations.

In the chlorpromazine group (13 patients) the response was moderate in one patient. In the chlordiazepoxide group, (13 patients) the response was maximal in one, moderate in two and minimal in three patients. There was no change in eight patients treated with chlorpromazine and in five treated with chlordiazepoxide. Worsening of the condition was noted in four chlorpromazine-treated patients and two chlordiazepoxide-treated patients. In the placebo group (15 patients) five showed no change and 10 became worse.

Extrapyramidal stimulation was seen in four patients receiving above 400 mg. daily of chlorpromazine and in four patients receiving above 600 mg. daily of chlordiazepoxide. At the respective dosage level, ataxia was observed in three chlorpromazine-treated patients and in two chlordiazepoxide-treated patients. Hypermotor activity was observed in two patients receiving above 150 mg. per day of chlordiazepoxide. There was no evidence of toxicity.

Chlordiazepoxide was found to be an effective agent for the relief of anxiety and tension with an associated improvement in social behavior in an additional group of 143 psychiatric patients. Patients entered into treatment and ward activities more readily and in most cases were more accessible to therapy.

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Fibrinolysis And Fibrinogenemia In Carcinoma Of The Lung

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Within recent years fibrinolysis and fibrinogenemia has been described in an increasing number of conditions such as surgical and traumatic shock,[1,2] anoxia, carcinoma of the prostate,[2,3] pancreas and stomach,[4,5] in major surgical operations, particularly thoracic operations and in certain obstetrical situations.[6,7,8] Tagnon and his associates[3] described fibrinolysis and associated hypo-fibrinogenemia in the presence of metastatic carcinoma of the prostate. Swan et al[9] reported the occurrence of fibrinogen deficiency and fibrinolysis in metastatic carcinoma of the pancreas. In 1960, Fountain and Holman[10] reported fibrinogen deficiency associated with carcinoma of the bronchus. The purpose of this paper is to report the occurrence of fibrinolysis and fibrinogenemia in carcinoma of the lung.

Case Report

The patient, a 36-year old white housewife, was admitted to the Hospital of St. Raphael on February 26, 1954 complaining of pain and tenderness in the right hip and thigh of ten days duration.

Obstetrical History: Para III, Grava III. Preeclampsia, manifested by hypertension, albuminuria, ankle edema, occurred in her second pregnancy at age 23. No abnormal bleeding occurred during pregnancies or post-partum.

Family History and Occupational History: Noncontributory.

Past History: Pneumonia and a fractured vertebra occurred in childhood. Appendectomy was performed at age 16. A benign cyst of the left breast was removed surgically at age 26. In August, 1952, she entered another hospital complaining of dull left chest pain, aggravated by deep breathing, and shortness of breath. Physical examination and roentgenographic studies at that time revealed left pleural effusion. Except for slight pallor and temperature of 101 degrees no other pertinent physical findings were noted. Laboratory data revealed a red blood cell count of 4.43 mm^3. A leucocyte count of 11,500 was present with 70 per cent neutrophils, 28 per cent lymphocytes, two per cent monocytes. No studies were performed to determine the presence of any abnormal bleeding tendencies. Repeated thoracenteses were performed and "Port Wine" fluid, varying from 1,300 cc to 150 cc in amount, was found on each occasion. The specific gravity of the fluid was 1.015. Repeated examinations of sputa and pleural fluid were negative for tumor cells, acid fast bacilli and pyogenic organisms. Bronchoscopic examination was negative. Gradual subsidence of fever occurred with bed rest. She was transferred to a state tuberculosis sanitorium on September 9, 1952, with a diagnosis of tuberculous pleurisy with effusion.

She remained asymptomatic. Repeated thoracenteses were performed at the sanitorium, and decreasing amounts of bloody fluid obtained until, in late October, 1952, no further fluid was obtainable. Examination of pleural fluid for acid fast organisms was negative. She was placed on therapeutic regime of Streptomycin and Para-amino-salicylic acid in late October, 1952 on the rationale that a parenchymal focus not demonstrable by clinical picture or roentgenograms might exist. She left the sanitorium against advice in December, 1952. She was periodically examined at the Chest Clinic of another hospital as late as January, 1954.

System review was essentially negative.

Present Illness: Ten days prior to admission the patient suffered sudden severe pain in the right hip and lateral thigh, with radiation of the pain to the right lower leg and foot. Five days prior to admission the patient fell, and following this the pain in the hip and right lateral thigh became more severe and she was unable to extend the right leg fully at the knee because of pain. The pain intensity increased and became localized in the right thigh. She noted ecchymotic areas between the first and second toes on the right foot and on the right buttock. A history of easy bruising of four months duration was obtained. In January, 1954 she had noted hematuria, dysuria and frequency and at that time was told she had a urinary tract infection. For relief of recurrent dull left chest pain, she had been taking aspirin in amounts from five to 50 grains daily. A history of recent intermittent tarry stools, without any other gastro-intestinal complaints was obtained. Menstrual periods had always been regular, lasting five days. Menses had begun five days prior to admission and the flow had been unusually heavy. In the six months prior to admission a seventeen pound weight loss had occurred.

Physical Examination: Revealed a pale, well developed, well nourished, white female who appeared older than her stated age. BP-138/68. R-20. T-100.6. P-90. Her head and ears were negative. The eyes were negative except for conjunctival pallor. The nose, mouth, pharynx were negative, except for pallor of the mucosal surfaces. The neck was not remarkable. The thyroid was not enlarged. The breasts were normal except for a linear healed horizontal scar beneath the left areola. The lungs were clear to percussion and auscultation. The heart rate was 90 and the rhythm regular. A grade two apical systolic murmur, not transmitted, was present. The abdomen was soft, scaphoid with a well healed linear right lower quadrant scar. The liver, kidneys, and spleen were not palpable. No masses were noted. The right leg was partially flexed at the knee and hip, but was not rotated internally or externally. There was an area of ecchymosis two cm. in size between the first and second toes on the right foot and another over the iliac crest. There was slight edema of the right leg. The right calf was 0.25 cm. larger than the left 10 cm. below the patella. Twenty cm. above the patella the right thigh was two cm. larger than the left. The medial aspect of the right thigh and the right calf were warmer than the left. Marked tenderness of the right calf was present on deep palpation. The tenderness extended along the course of the right femoral vein. Homan's sign was positive on the right. Extension of the knee or hip caused exquisite calf pain. Rotation of the leg at the hip did not elicit pain. Neurological examination was essentially normal. The impression on admission was that the patient had an acute thrombophlebitis of the right leg, possibly involving the pelvic veins.

Laboratory Data: The admission laboratory data was as follows: Hemoglobin: 7.5 grams per cent. Hematocrit: 30 per cent. WBC: 13,500 per mm^3. Neutrophils: 70 per cent. Lymphocytes: 26 per cent. Monocytes: one per cent. Eosinophil's: two per cent. Basophils: one per cent. Platelet count: 224,000 per mm^3. Coombs test was negative. Sedimentation rate: 10 mm in one hour (Wintrobe). Prothrombin time: 36 seconds. Clotting time (Lee-White) first tube: 13 minutes, 30 seconds; second tube: 15 minutes; third tube: 16 minutes. Red blood cell hemolysis began at 0.46 per cent and was complete at 0.32 per cent of Nacl concentration. The urinalysis was essentially negative. NPN: 24 mgm per cent. Fasting blood sugar: 94 mgm per cent. VDRL: negative. Total Protein: 7.25 grams per cent. Albumin: 4.84 grams per cent. Globulin: 2.41 grams per cent. Thymol turbidity: 1.2 units. Cephalin flocculation: negative. Alkaline phosphatese: 1.2 BU. Icteric index: 5 units. Van den Berg: direct 9.0, total 0.1 mgms per cent.

The chest film on admission revealed some prominence of the superior mediastinal shadow on the right. Increased prominence of the bronchovascular trunk markings throughout both lung fields were noted as well as some bilateral apical thickening. No definite parenchymal pulmonary lesion could be seen. Films of the pelvis, lumbar spine and right femur were negative except for some loss of the normal lordotic carrying angle.

Clinical Course: The patient, with bed rest, became afebrile in the ensuing 36 hours. Gradual subsidence of the calf tenderness and positive Homan's sign occurred and on her tenth hospital day she was able to flex the knee and hip without pain. The stools were grossly black and tarry on admission. She was placed on an ulcer regime and by the ninth hospital day stools were negative for occult blood and remained negative. A gastro-intestinal series on her tenth day was normal. Heavy menstrual flow continued throughout her illness.

The prothrombin time was abnormal on admission (36 seconds) and remained abnormal.

PROTHROMBIN TIME
(in seconds)

			TOTAL DOSAGE (MGM)	
HOSP. DAY	CONTROL	PATIENT	K. OXIDE	K
Admission	15	36		
1st	15	32.6		
2nd	15	31		
5th	15	33		
10th	15	27	300	
15th	15	24	400	360
20th	15	27	400	720
25th	15	28	400	1080

The significance of the abnormal prothrombin time was not appreciated at this time. She was given large doses of Vitamin K_1 oxide intravenously and Vitamin K intramuscularly with only slight improvement in her prothrombin time.

(CLOTTING TIME)
(Lee-White Method)

HOSP. DAY	1ST TUBE	2ND TUBE	3RD TUBE
	(minutes)	(minutes)	(minutes)
Admission	13:30	15	16
5	12:18	15:35	20:35
7	7:30	8:10	9:55
(9	Did not clot in three hours)		

On the patient's ninth hospital day the clotting time was 13 minutes and the clot appeared normal. Over the ensuing 60 minutes there was progressive and complete lysis of the clot. This phenomenon was observed repeatedly throughout the remainder of her hospital stay, at room temperature, and at 37 degrees C. At nine degrees C. lysis began in two and one-half hours and was complete within 24 hours. When the patient's blood clot was mixed with the serum of normal controls at 37 degrees C. and 28 degrees C. complete lysis of the control clot occurred in 81-87 minutes. Clots of normal controls were lysed by the patient's serum in the same time interval at 37 degrees C. and 28 degrees C. Patient's clot with serum removed added to a control clot with the serum removed led to lysis of both clots in 81 minutes. Blood stored in a deep freeze for one year in a clotted state did not lyse until thawing occurred; then lysis occurred rapidly. When the serum of the thawed blood was added to the clot of a normal control lysis of the control clot occurred.

It now seemed evident that we were dealing with a fibrinolysin.

Further observations on the prothrombin time in the light of the existence of a fibrinolysin, revealed that in addition to being prolonged, it was characterized by the formation of fine fibrils which underwent dissolution and a true clot of the fluid failed to occur. This phenomenon was observed until her death.

BLOOD FIBRINOGEN
(MGM/100 ML)

HOSP. DAY		REMARKS
17	88	500 cc Fresh Frozen Plasma 500 cc Whole Blood
18	95	3,500 cc Whole Blood
21	130	1,500 cc Whole Blood
25	116	

Fibrinogen determinations revealed 88 mgm/100 ml. The maximum level obtained, after 3,000 cc of blood was administered in 48 hours, was 130 mgm/100 ml. (Normal for our laboratory is 250-300 mgm per 100 ml)

No evidence of circulating anti-coagulants or agglutinin was found by Dr. Stefanini.

Since ACTH and cortisone have been shown to increase antifibrinolytic action[11, 12] she was placed on 200 mgm of ACTH and 300 mgm of cortisone daily. This was continued for 14 days until her death. No decelerant effect was noted on the lysis of the clot, nor was a change in prothrombin time noted.

On the fifteenth day of hospitalization she complained of anorexia, chilliness and a heavy feeling in the right thorax. Physical findings of right pleural effusion were noted clinically and confirmed by x-ray. A small firm lymph node was noted in the supraclavicular fossa and was removed. Thoracentesis was performed and 1,800 cc of a grossly bloody fluid removed. Tumor cells of a bizarre, highly anaplastic nature were found in the pleural fluid.

The biopsied lymph node revealed a highly anaplastic carcinoma, resembling a poorly differentiated adeno-carcinoma, strongly suggesting mucous secreting epithelium. Repeated thoracentesis at 1-3 day intervals were required following the onset of the pleural effusion. In an attempt to irradiate the tumor, thereby decreasing the fibrinolysin, hypofibrinogenemia and the recurrent hemothorax, 93 millicuries of radioactive gold were instilled in the right pleural cavity. In the ensuing 10 days her respiratory distress increased. On her thirty-second hospital day she developed congestive heart failure and died.

POST MORTEM: Pertinent findings were limited to the thoracic cage. There was 4,500 cc. of bloody fluid in the right pleural cavity. Intense injection of the right pleura was present. There were no adhesions. The left pleural cavity was normal. The right lung in the region of the hilus showed an infiltrating mass whose origin could not definitely be determined due to the presence of high degree of radioactivity. The entire region of the hilus and around the bronchi was replaced by a white, finely granular hard mass. Hilar lymph nodes were enlarged and the normal architecture was replaced by white finely granular substance.

The tumor in the lungs and in the lymph nodes was identical. It was composed of a fairly closely knit fibrous stroma, containing cells which were without any definite arrangement, but were present in sheets and nests as well as individually.

The cells of the tumor were most bizarre in every respect. They varied from quite small cells to enormous tumor giant cells. The cytoplasmicnuclear ratio varied enormously. Cytoplasmic staining tended to be mildly eosinophilic although some foci were found where the staining was definitely basophilic. The nuclei showed enormous variations in size, distribution of chromatin and staining potential. They were for the most part intensely hyperchromatic. Mitoses both normal and extremely abnormal were very frequent.

The tumor was proven to be a carcinoma of extremely high malignancy, typical of the most undifferentiated pulmonary tumors.

Discussion

We have described a case of carcinoma of the lung with a profound effect upon the clotting mechanism of the blood. This is an example of what Stefanini[12, 13] has referred to as "fibrinolytic purpura" (a hemorrhagic diathesis with petechiae, ecchymosis and bleeding from one or more orifices).

In the case recorded, fibrinolytic activity was demonstrated by a series of simple, but convincing, experiments wherein the lysis of the clot was noted repeatedly at room temperature at 37° C., and 9° C. Serum or whole blood from the patient was shown to have lytic properties on normal control clots at varied temperatures, and after freezing. The fibrinolytic process was observed when serum which had been frozen for one year was added to normal control clots up to one year later.

Complete breakdown of the coagulation mechanism due to fibrinolysis may occur due to the liberation of fibrinolysokinase from tissues in hemorrhage, shock, trauma and extensive surgery. While stress and the pituitary adrenal cortical splenic axis serves to explain fibrinolysis[11] in these conditions it does not explain its occurrence in the presence of certain carcinomas. It has been known for many years that proteolytic enzymes are present in kidney, liver, lungs, pancreas and thyroid.[14] In 1946-1947 MacFarlane and Biggs[15,16] found that in fever, trauma, fear and after exercise, fibrinolysis occurred concurrently with lymphocytosis and thrombocytosis. From these observations it is clear that rapid dissolution of fibrin occurs in a wide variety of disturbances within the human body. In this instance fibrinolysis appears to have been directly related to carcinoma of the lung, and in much the same manner as Tagnon, Swan, Fountain and their associates[3,9,10] noted in their studies of carcinoma in other organs.

This case was recorded in brief form before the New York Society from the Study of Diseases of the Blood in May, 1955. Our thanks go to Dr. Milstone for his help and interpretation of the prothrombin time studies; to Dr. Mario Stefanini for his criticism and interest; to Dr. Robert Nesbit, Department of Pathology, Hospital of St. Raphael, for his interpretation of the pathology and his unfailing help and kindness; and to the entire pathology staff for their help in performing experiments involved.

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The Use Of The Menghini Needle In Percutaneous Liver Biopsy

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Comprehensive articles and reviews[1,2] attest to the value of percutaneous liver biopsy in clinical medicine. Diagnostic and therapeutic studies with serial biopsies have increased our understanding of liver disease immensely. While the morphological alterations of liver tissue constitute the principle means of classifying hepatic disease today, recent studies of the biochemical and enzymatic changes occurring in diseased liver tissue promise to further increase the value of liver biopsy.

The indications (Table 1) and contraindications (Table 2) to liver biopsy have been firmly established, and the observance of these rules has made this procedure as safe as a lumbar puncture, thoracentesis and abdominal paracentesis.[3] This diagnostic procedure has been employed in infants and children without serious consequences.[4]

In 1958 the Menghini biopsy needle was introduced.[5] Prior to this time the Vim-Silverman needle had been used by the majority of authors. The Menghini needle resembles a long, large caliber intravenous needle. Its tip, however, is convex. A small metal rod fits loosely into the proximal end and hub of the needle (Figure 1). This "nail" prevents the aspiration of the tissue specimen into the syringe where it may become fragmented. The Menghini needle may be obtained in several diameters ranging from one to 1.9 mm. We have found the 1.9 mm. most suitable for our needs. There are two lengths available. The four cm. needle for pediatric use and the seven cm. for adult subjects.

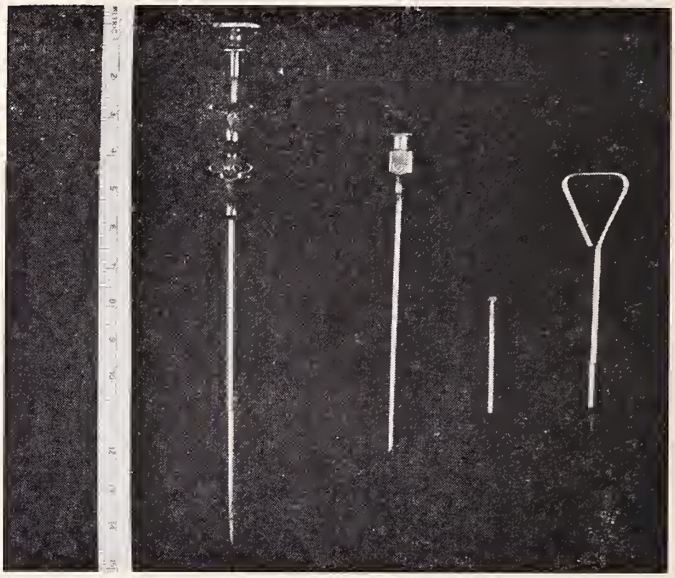

Figure 1. Comparsion of the size of the Menghini needle with the Vim-Silverman needle. From left to right are illustrated the Vim-Silverman needle, the Menghini needle, the "nail" and the skin dagger.

The Menghini liver biopsy needle offers two distinct advantages. The first advantage resides in the speed in which the liver biopsy may be performed.

Table I

indications for liver biopsy

1. Hepatomegaly of unknown etiology.
2. Jaundice of obscure origin.
3. Granulomatous diseases (T.B., sarcoid, fungi, etc.).
4. Primary or metastatic tumor.
5. Metabolic diseases (hemochromatosis, amyloidosis, etc.).
6. To follow course of liver disease.
7. Economy (fewer function tests, exploratory operations, etc.).
8. Evaluation of therapy.
9. Investigation (enzyme studies, correlation of function tests, etc.).

Table II

contraindications to liver biopsy

1. Abnormal coagulation studies.*
2. Severe anemia.
3. Local infection (base of lung or peritoneum).
4. Massive ascites.
5. High degree of extrahepatic biliary obstruction.
6. Completely uncooperative patient.

* The clotting and bleeding times should be normal. The prothrombin time should be greater than 50 per cent. Stefanini, however, made this important remark: "We have found that severe thrombocytopenia and a prolonged bleeding time are much more important contraindications to biopsy (than the prothrombin time) . . . In fact, we have done biopsies in the presence of plasma prothrombin activity as low as 20 per cent without complications, when the platelet count and bleeding time were within normal limits." (New England J. Med. 253: 150, 1955.)

Note: The Menghini biopsy needle may be obtained from the Institutional Products Company, 161 6th Avenue, New York, New York.

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This is 1/10th the time needed with the Vim-Silverman needle. The second noteworthy quality is the smaller size of the Menghini needle. Lacerations of the liver, pneumothoraces and severe bleeding have never been recorded. Pain is minimal and of short duration. There have been no severe complications resulting from the use of the Menghini needle in over 2,000 instances.[5]

Procedure

Premedication is not necessary except in the occasional case where the anxiety of the patient demands it. The upper and lower limits of liver dullness are determined and this area is sterilized with tincture of merthiolate (1:1000) and then draped with sterile towels. The skin and subcutaneous tissue down to and including the liver capsule are then infiltrated with a one per cent procaine solution. The eighth, ninth or tenth intercostal space in the mid—or posterior axillary line is the usual site. When there is considerable hepatomegaly the anterior or subcostal approach may be used. Allowing a few minutes for the anesthetic to take effect, a puncture wound about one centimeter deep is then made through the skin into the subcutaneous tissue using the special dagger supplied with the biopsy needle.

The biopsy needle, with the blocking device in place, is then attached to a 10 c.c. syringe containing about three c.c. of saline or procaine solution. (The same syringe used for infiltration may be employed.) The biopsy needle is then inserted into the puncture wound and about one-half of the solution is expressed from the syringe in order to remove any tissue fragments which may block it.

The patient is requested to hold his breath in expiration. Negative pressure is created in the syringe by drawing up on the piston. Maintaining this suction the needle is rapidly thrust into the liver and withdrawn. This latter maneuver requires approximately one second. The specimen is then expressed from the needle by expelling the solution remaining in the syringe. Step by step drawings are found in the original paper of Menghini.[5]

Following the procedure the puncture wound is covered with a simple dressing (one of the proprietory strip bandages is sufficient) and the patient is instructed to remain in bed for 24 hours during which time the vital signs are obtained at hourly intervals for six hours. The hemoglobin and hematocrit levels are obtained about 15 hours later.

Discussion

This paper reports our experiences with the Menghini needle between August 1959 and August 1960. During this time 44 biopsies were performed on 39 subjects. As many as three separate biopsies from multiple sites were performed on one subject on one occasion. The ages of the patients ranged from 16 to 80. It is important to state that in several patients their full cooperation could not be obtained. For example, in the case of a 16 year old patient who was mentally retarded, the biopsy was obtained in the short period of apnea which was produced when her nose was pinched and her mouth covered by an assistant's hand. A similar procedure was used in the other patients who were uncooperative. If the patient is an infant, compression of the thoracic cage has been advised[6] as a method of producing monentary apnea. It is obvious that the decisive factor in these cases is the rapidity of the procedure. In all cases except three the intercostal approach was used. In the three cases where massive hepatomegaly was present, an anterior (subcostal) technique was employed.

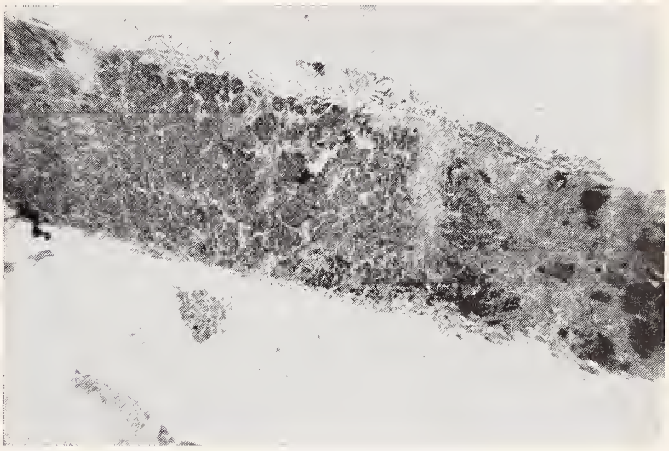

FIGURE 2. This biopsy specimen demonstrates that an adequate core of tissue may be obtained with the Menghini liver biopsy needle even when extensive fibrosis is present. The histological diagnosis in this case was "adenoma of the liver." Three biopsy specimens were obtained from various sites on a single occasion in this patient in an attempt to determine the size of the tumor.

We have had no "misses." A satisfactory core of liver tissue measuring two to three cm. in length was obtained in all instances. During the trial period during which biopsies were performed on cadavers we observed that the slower the thrust and withdrawal phases, the smaller the biopsy specimen. Many times no specimen was obtained. Therefore speed not only reduces the inherent risk of the procedure but also tends to increase the size of the specimen. One objection which has been offered against the Menghini needle has been the alleged difficulty in obtaining adequate material when the liver is fibrotic or sclerotic. This has not been our experience. A markedly fibrotic liver biopsy specimen is shown in Figure 2. Perhaps those who have experienced this difficulty were using a needle of small caliber or improper technique.

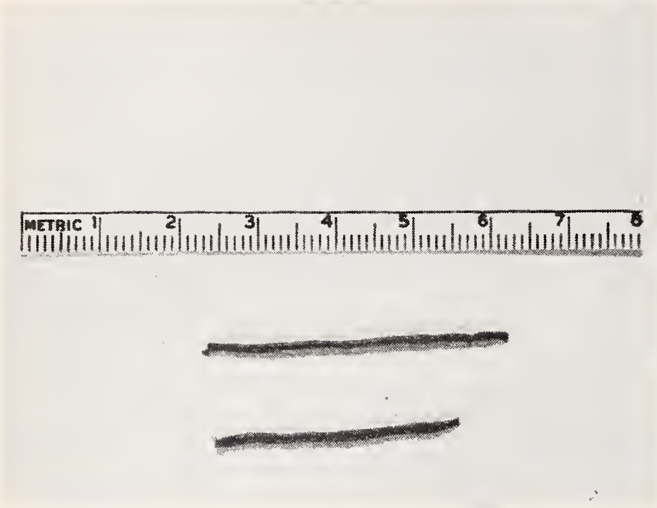

FIGURE 3. Comparison of the biopsy specimens obtained with the Vim-Silverman needle (top) and the Menghini needle (bottom). While the latter is slightly shorter in length, it is thicker.

We have had no complications with the use of the Menghini biopsy needle. Hemoglobin and hematocrit values have shown no significant change following the procedure. The maximum hemoglobin decrease we have observed was 0.5 gram per cent and this may be due to normal laboratory variation. Pain has never been severe and when present usually consists of a dull, aching sensation in the right shoulder due to diaphragmatic irritation. One dose of codeine (gr.¼) has been used to control this sequela. A small temperature rise of 1-2° Farenheit has been observed several times following the biopsy procedure. However, the temperature always returned to pre-biopsy levels within six hours. The nature of this fever is not clear but we believe it may be psychogenic and related to the apprehension of the patient.

The specimens obtained with the Menghini needle are of excellent quality and compare favorably in quantity and quality with those procured with the Vim-Silverman needle (Figure 3). The core of tissue is expressed from the needle directly into the fixative solution as soon as it is obtained. Cutting of the specimen should be done with a sharp knife to avoid the fragmentation. A variety of staining procedures may be used. The various diagnoses made histologically are listed in Table 3.

While the smaller size and faster technique of the Menghini needle have enhanced the safety of percutaneous liver biopsy, this does not eliminate the need for the careful selection of cases. To ignore the conträindications and to employ improper or careless technique will lead only to disasterous consequences. Observance of these simple rules make blind biopsy of the liver with the Menghini needle a practical and safe procedure.

TABLE III

HISTOLOGICAL DIAGNOSES MADE IN 39 LIVER BIOPSY SPECIMENS

Normal Liver	8
Laennec's cirrhosis	7
Biliary cirrhosis	1
Fatty metamorphosis	5
Postnecrotic cirrhosis	2
Acute viral hepatitis	3
Cholangiolitic hepatitis	2
Anicteric hepatitis	1
Chronic hepatitis	1
Extrahepatic biliary obstruction	2
Hodgkin's disease	1
Lymphatic leukemia	1
Hemochromatosis	2
Tuberculosis	1
Hepatoma	1
Cyst	1

Summary

The Menghini liver biopsy needle is described. The smaller size and the faster technique used with this needle make blind biopsy of the liver a relatively safe procedure. We have performed 44 biopsies on 39 subjects without complications. The specimens of tissue obtained are adequate and compare favorably to those procured with the larger Vim-Silverman needle. The various histological diagnoses made from the biopsy specimens are listed.

Acknowledgment

We are indebted to Dr. Theodore S. Evans of the Medical Department and Dr. Robert Nesbit of the Pathology Department for their help in this study.

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The Treatment And Outlook For Parkinson's Disease

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Parkinson's disease in most instances offers highly favorable prospects for enduring good results, if treatment is undertaken early and intensively. It is roughly estimated that there are over a million Parkinson patients in this country and their numbers are growing, because of the lengthening span of life in the general population. The care of most of them falls to the lot of the general practitioner, who sees them from the start of the illness, when the greatest good can be accomplished toward the prevention of later life deformities and disabilities.

Why is early and comprehensive treatment so important here? In Parkinson's disease, unlike multiple sclerosis, there is no paralysis and unlike polio, there is no primary atrophy of the muscles. The disease affects the basal ganglion, a small center at the base of the brain, but not the brain itself, hence speech and intelligence are preserved and the patients are fully capable of cooperating in the treatment program. Since there is no involvement of the pyramidal system or the lower motor neurones, one would not expect *atrophy,* or *contracture* or *deformity* in this illness. How does it happen then that some patients do become deformed and crippled in body during the later years of illness? The answer is neglect of proper treatment.

Pathophysiology Of Contracture Deformities And Their Prevention

Among patients deprived of physiotherapy and proper exercise and activity, the events that lead to disuse atrophy and ultimate contracture are as follows: Rigidity entails some resistance to the use of the affected muscles, hence the patient finds it easier to adapt himself to the use of the free and uninvolved muscles. Unused muscle tissue in time undergoes atrophy and becomes replaced by fatty connective tissue, which later turns into fibrous connective tissue, with scarring and shortening of the muscles. Shortened muscles cannot fail to offer still greater resistance to movement and with less movement there is more and more disuse atrophy, more and more fibrosis and contracture, so that a "vicious" cycle ensues.

In the early stages the contractures are reversible, i.e., the patient cannot fully extend the arm by his own efforts, but a physiotherapist can do so. As time passes, however, the contractures become irreversible, so that no one can fully extend the arm or neck and the flexion deformity of arm and neck remains permanent. In time other areas of the body become affected by contractures, until the patient can barely stand or walk. The shortened neck muscles draw the head downward, so that reflex swallowing of saliva becomes difficult. Saliva collects in the mouth and with the pull of gravity, there is constant drooling. The droop of the head draws the upper part of the spine downward, leading to kyphus formation. The muscles on one side of the spine shorten and twist the body to one side, producing scoliosis and a list of the trunk to the left or right. The shortened tendo-Achilles and hamstring cords lead to pes equinus posture, propulsion, festination, falls and injuries and ultimate invalidism. (Figure 1) All this can be prevented by proper and timely treatment. With suitable medication, physiotherapy and regular exercise by the patient, the affected muscles can be made easier to move and the more they are moved, the easier they are to use. In this manner, a "healthy" cycle can replace a vicious cycle.

Neglect of proper treatment is not necessarily the fault of the patient and family, but is often due to conditions beyond their control. In many areas of our country, physiotherapy facilities are non-existent, or if available, the expense is beyond the means of the patient. Some clinics and hospitals are undermanned, so that services are limited to acute problems, such as back injuries or polio, with little or no time for treatment of chronic problems such as Parkinson's disease. It is to be hoped that the newly formed National Parkinson Foundation may succeed in its projected programs of training personnel for the growing numbers of chronic sufferers and the establishment of facilities for the care of all Parkinson patients, be they rich or poor.

The early and ambulatory Parkinson patients are as a rule easy to treat. For one thing, unlike other diseases, the diagnosis of Parkinson's disease does not require the special skills of a consultant, nor complicated hospital investigations. Most often, a mere glance at the patient, with his shuffling gait, frozen facies, tremor and slowness of movement suffices.[1] Secondly, there are stationary periods of five or 10 years among many patients, during which there is little progression in the symptoms and they can be successfully managed with little effort. Such patients can, however, become a problem if they neglect medical supervision and treatment and re-

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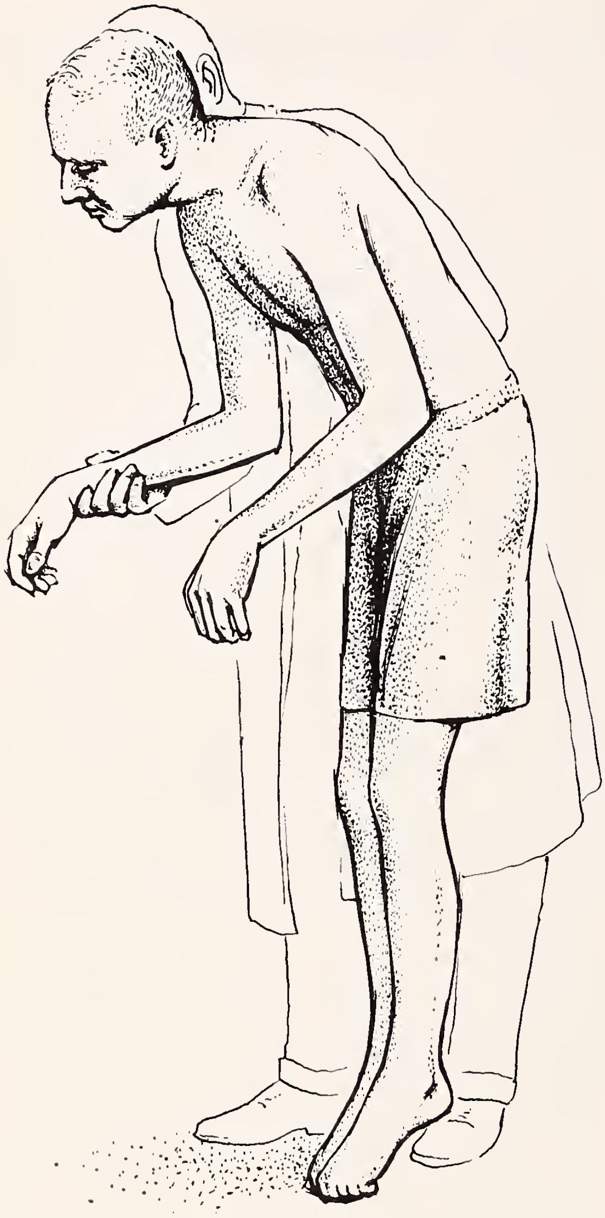

Figure 1. Typical example of malposture, deformity and disability in Parkinson patients, largely chargeable to neglect.

port to the doctor only after a lapse of years, when the symptoms have progressed beyond repair. It is therefore important that the patient visit his doctor, at office or clinic, at regular intervals, once a month if possible. Thirdly, Parkinson patients usually do not expect a cure and they are appreciative of any improvement in their condition. Lost functions, such as putting on a coat or getting out of bed, which have little meaning to us, may be of great moment to a patient, since if he learns to get out of bed on his own resources, he is spared the annoyance of having to waken his family five times a night in order to get him safely to the bathroom.

The post-encephalic and idiopathic cases are generally much easier to manage than the arteriosclerotic Parkinson cases, which present more frequent complications of prostate, memory impairment, sensitiveness to drugs and more rapid progression of symptoms. The advanced and disabled Parkinson patients under present conditions constitute a challenge not only to the family, but to the doctor, from whom the impossible is often expected. There are few placement facilities available to such patients and their nursing and other care is far beyond the resources of the average family. Hospitals usually reject them because they do not constitute interesting research or teaching material and they require more than ordinary nursing care. Nursing and convalescent homes do not welcome them because of the extra care they require. Even custodial and chronic hospitals often find reason to exclude them. The absence of placement and rehabilitation facilities for the disabled cases has a bad effect upon the patient and family and is a severe strain upon the physician. The solution lies in early and proper treatment to prevent the disabilities of later years and the establishment of special facilities, such as are to be discussed later in this paper.

What is proper treatment for a Parkinson patient? This should embrace the three essentials[2] of medication, physiotherapy and directed exercises by the patient, in addition to orientation of the patient as to the nature of his illness and supportive psychotherapy during each visit. Orientation of the patient and the family can now be achieved through a recent inexpensive book by the author,[3] written especially for the purpose. The psychotherapy of Parkinson's disease is within the training and resources of every general practitioner.[4] One does not have to be a psychoanalyst to provide good practical psychotherapy to Parkinson patients, because these people are suffering from an organic ailment and moreover are far past the age of frustrations arising from childhood sexual experiences. Nor is hypnosis required or beneficial in this illness since even under expert use the results are fleeting and of no lasting value. The psychotherapy of this disease chiefly entails sympathetic attention to the patient's personal problems, his symptoms and reactions to drugs, and reassurance that will help him to keep active and to hurdle his difficulties.

Medication

The medicinal armamentarium for Parkinson's disease has been materially improved and expanded by the addition during the past decade of synthetic drugs. Prior to this, treatment rested entirely on drugs extracted from the belladonna family of solanaceous (potato) plants. The active ingredients consisted of atropine, hyoscyamine and hyoscine. Hyoscyamine becomes transformed into atropine upon entering the stomach. Thus, if we were to extract the potato plants for the next hundred years, we could not possibly obtain anything further than atropine and hyoscine. These alkaloids moreover possess disturbing side reactions and atropine cannot be employed in older patients because of the hazard of glaucoma.

Synthetic drugs, on the other hand, can be created in endless numbers, hence opportunity is afforded to select those with specific action against the symptoms of the disease and those with the least disturbing side effects. Moreover, the mere addition of a tiny molecule to a synthetic compound can create a drug with an entirely new set of actions. Thus, the addition of a methyl group to diphenhydramine (Benadryl), Figure 2 A, at the ortho position of the ring served to bring about a preparation with actions entirely different from the parent compound. The drug is now called Disipal, Figure 2 B and instead of causing drowsiness, has become a cerebral stimulant, an energizer and a muscle relaxant, none of which properties are contained in Benadryl. It is also a powerful anti-diaphoretic and anti-sialorrhea agent.

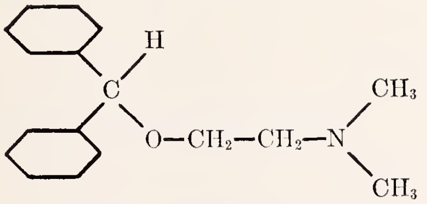

FIGURE 2A
Diphenhydramine (Benadryl)

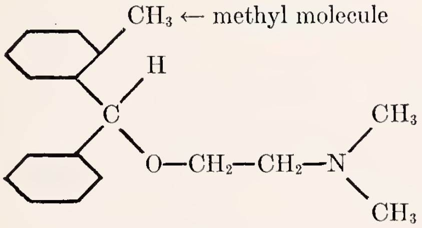

FIGURE 2B
Orphenadrine (Disipal)

Of hundreds of new synthetic drugs tested at the Vanderbilt Clinic and the Parkinson Laboratory of the Presbyterian Hospital during the past ten years, only seven have successfully withstood the test of large-series and long-term investigation, as useful agents against the symptoms of Parkinson's disease. These are Artane,[5] Pagitane,[6] Kemadrin,[7] Cogentin,[8] Parsidol,[9] Disipal,[10] and Phenoxene.[11] References are provided as source material for those not fully acquainted with the posology, actions and side effects of some of these new compounds.

Physiotherapy

This is extremely important for the prevention and correction of contractures, provided these have not reached the stage of irreversibility. It should be employed in every instance of rigidity and some 90 per cent of Parkinson patients present this symptom. Patients with tremor, uncomplicated by rigidity, do not require this treatment but should they have it, no harm could come from it.

Most doctors have come to employ the various anti-Parkinson drugs to good advantage, but many of them still fail to utilize physiotherapy with the regularity that it deserves. They will advise physical treatment but fail to clarify its value to the patient's immediate and future welfare. A patient so unprepared entertains unrealistic expectations from one or two treatments and, failing this, discontinues physiotherapy, which is a great loss to the patient and the doctor. The patient must be prepared to employ physiotherapy as long as there is rigidity, which means for the rest of his life, unless we obtain drugs that are far better than any we have today.

Physiotherapy in Parkinson's disease should consist of vigorous massage to soften the muscles and stretching (manipulation) to loosen the muscles and joints. The trained physiotherapist's time must not be wasted on baking lamps, whirlpool baths or "bubble" baths, which can be taken in the patient's own leisure time. The treatment should last an hour and be administered once, twice or three times a week, depending on the extent and severity of the rigidity, contractures and motor deficits. Special orders may be given the physiotherapist to correct propulsion, a drooping spine, poor balance or the inability to get out of bed safely. The physiotherapist always strives to cooperate and never tries to be the doctor on the case. If there is lack of progress, he will turn to the doctor for further directions.

Exercise And Activities By The Patient

Every activity is important to the health of the muscles. The patient should be taught that 80 per cent of the muscle is water and that just as "running water does not freeze," so moving muscles do not freeze, shrink or ache.

Patients that perform manual labor do not require special exercises to protect the muscles. Those employed at sedentary work should engage in regular programs of exercise to prevent the formation of contractures, or to correct those that have set in. The trained physiotherapist is fully capable of setting and guiding the patient in exercises best suited to his needs and will do so, if ordered by the doctor. Moreover he sees the patient far more often than the doctor, hence he is in a position to direct him in the use of various gadgets and calisthenics to loosen his muscles and improve his function.

Patients should be encouraged to continue at work as long as they can perform satisfactorily. Partial retirement or a shorter hour schedule is far better for the physical and emotional health of

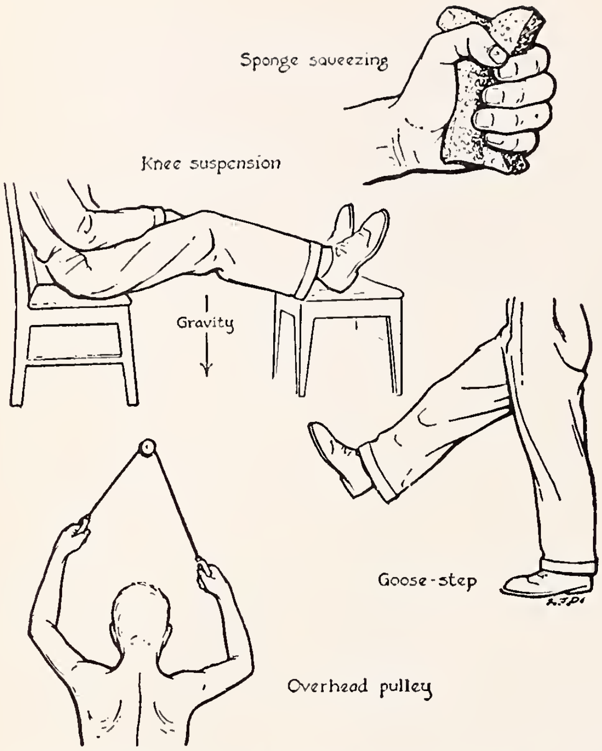

Figure 3. Simple exercises to prevent and correct contracture and deformity at vulnerable areas of the body.

the patient than full retirement. He should, however, be protected against performing work under pressure of a time schedule and should be permitted short rest periods, if possible. The vulnerable areas of the body requiring extra protection again contracture and deformity are at the neck, knee, foot and hand. Exercises for the correction of the same are presented in Figure 3. The overhead pulley is easy to contruct and merely involves a hook, a pulley and a piece of rope with a knot at each end.

The Outlook

This has been remarkably improved within the past three years.

1. We are getting better and better drugs. Pharmaceutical houses throughout the country have become aware of the importance and needs of the rapidly growing numbers of Parkinson sufferers and are bending every effort to create drugs with greater potency and less disturbing side effects.

2. Neurosurgery has become increasingly interested in finding ever better tools and procedures to help Parkinson patients who fail to respond to conservative treatment programs.

3. The Federal Government, the American Medical Association, and other agencies have become sharply awakened during the past two years to the growing challenge of the Aged and Infirm. Some of this aroused interest cannot fail to lead to the establishment of improved treatment conditions for the advanced and disabled Parkinson patients.

4. Within the past two years two Parkinson Foundations have come into existence. The Parkinson's Disease Foundation is dedicated to research into the cause and means of prevention and cure of the disease. The National Parkinson Foundation is dedicated, besides basic research, to the discovery of better treatment measures and the establishment of facilities for the care of the afflicted. Their combined efforts, if vigorously supported by the public, should lead to far better prospects for the care of the advanced and disabled Parkinson patients, which are at present the greatest challenge to the physician, since the early cases are very easy to treat.

5. During the last three years it has been found possible to produce the symptoms of Parkinson's disease in normal people by feeding them drugs, which are *exogenous chemical substances.* This brings the unprecedented hope that with research to be initiated by the Parkinson Foundations, chemists may be able to discover the nature of the *endogenous chemical substances* that are responsible for the progressive death of cells of the basal ganglia and an antidote to prevent such endogenous substances from producing the symptoms of Parkinson's disease, or at least to arrest the progression of the symptoms.[12]

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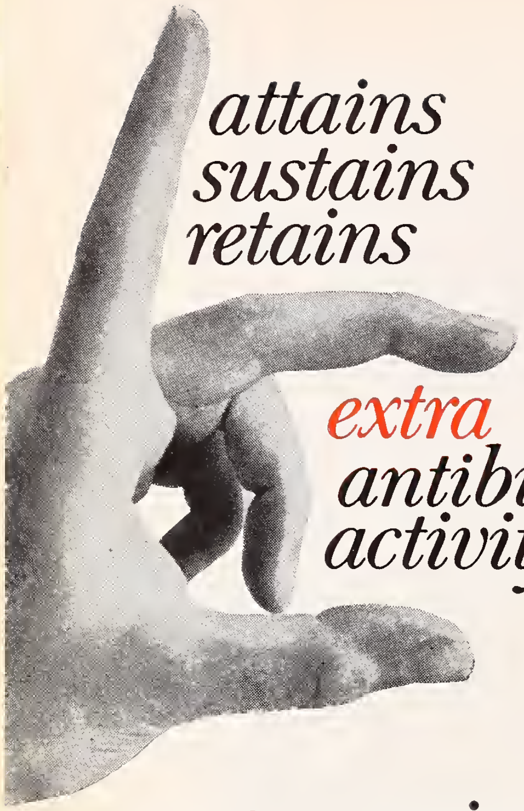

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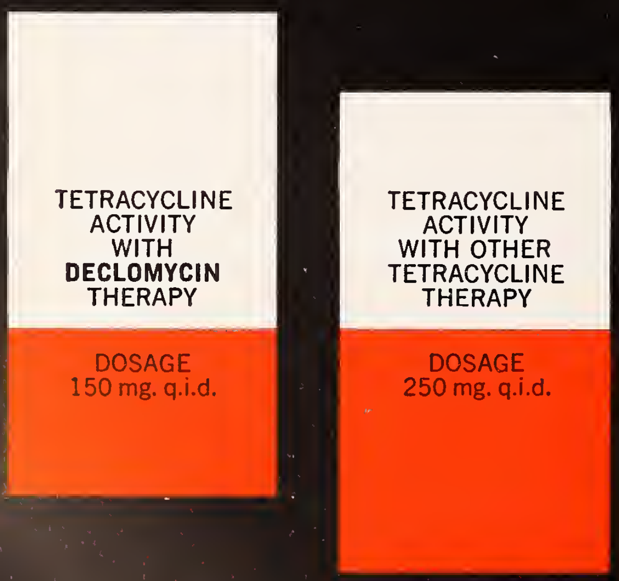

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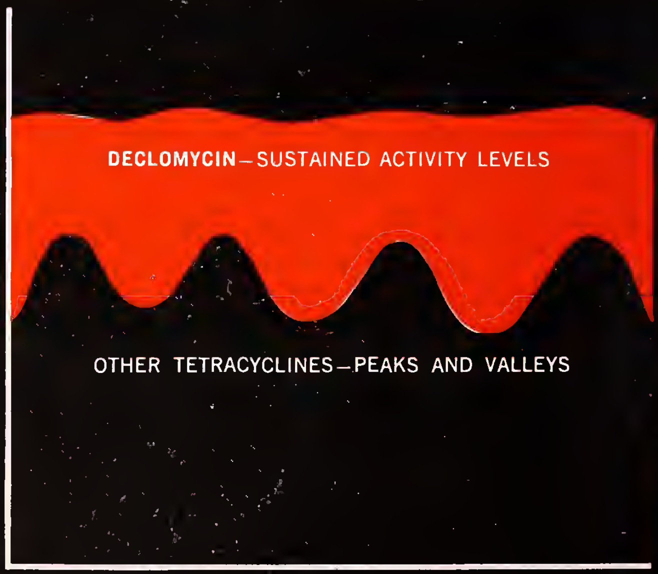

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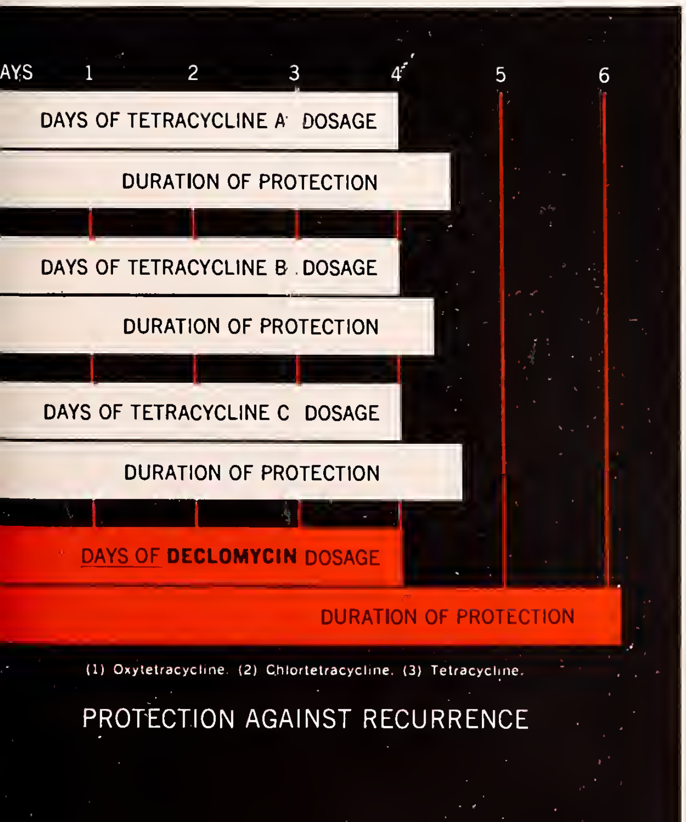

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169th ANNUAL MEETING

# of the

CONNECTICUT STATE MEDICAL SOCIETY

Hamden High School
2040 Dixwell Avenue, Hamden, Connecticut
April 25, 26, 27, 1961

PROGRAM COMMITTEE

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PRELIMINARY PROGRAM

Tuesday, April 25

Auditorium

Annual Meeting of the House of Delegates

Michael R. Scully, *Bridgeport, Speaker of the House, presiding*

10:00 Call to Order
Business Session

1:00 Luncheon for Officers, Members of the House and Guests

2:00 Resumption of Business

7:00 Annual Dinner of the Council

Wednesday, April 26

9:00 REGISTRATION—EXHIBIT HALL

AUDITORIUM

10:00 CALL TO ORDER—John N. Gallivan, East Hartford, President of the Society
ADDRESS OF WELCOME—President, New Haven County Medical Association

10:30 SYSTEMIC LUPUS AND OTHER AUTO-IMMUNE DISORDERS
William Dameshek, Boston, Massachusetts

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

11:40 THE PRACTICING DOCTORS PLACE IN MODERN CRIME DETECTION
Geoffrey T. Mann, Richmond, Virginia

12:20 THE SYMPTOMS AND TREATMENT OF COMMON POISONS
Jay M. Arena, Durham, North Carolina

1:00 LUNCHEON—Cafeteria of the High School
VISIT TO TECHNICAL EXHIBITS

2:00 SUBJECT TO BE ANNOUNCED
Douglas N. Buchanan, Chicago, Illinois

2:40 CURRENT CONCEPTS OF ANTIBIOTIC THERAPY
Paul Fremont-Smith, Boston, Massachusetts

3:30 **Meetings of Sections of the Society and Guest Organizations**
Section on Allergy
Section on Gastroenterology
Section on Neurosurgery
Association of Medical Examiners of Connecticut } Joint Meeting
Connecticut Society of Pathologists }
Section on Proctology
Section on Urology
Connecticut Diabetes Association
Connecticut Association of Medical Record Librarians (10:00 A.M.)
Connecticut Chapter, National Association of Social Workers (Medical Section)
Connecticut Society American Board Internists

7:00 **Annual Dinner of the Society**

Thursday, April 27

9:00 REGISTRATION—EXHIBIT HALL

AUDITORIUM

9:05 FILM—The Cancer Detection Examination—"Early Diagnosis for Good Prognosis" narrated by Emerson Day, Director of the Strang Detection Clinic, Memorial Center, New York

10:00 THE MEDICAL COLD WAR
Congressman Thomas B. Curtis, Missouri

11:00 Question and Answer Period

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

11:40 CARDIAC SURGERY IN A COMMUNITY HOSPITAL
Joseph V. Crecca, Orange, New Jersey

12:20 SURGICAL CONSIDERATION IN PANCREATITIS
Henry Doubilet, New York City

1:00 LUNCHEON—Cafeteria of the High School
VISIT TO TECHNICAL EXHIBITS

PROGRAM ARRANGED BY
CONNECTICUT SOCIETY OF AMERICAN BOARD SURGEONS

2:00 TRANSPLANTATION OF THE HUMAN KIDNEY
Joseph D. Murray, Boston, Massachusetts

3:00 Question and Answer Period

3:30 MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

Section on Anesthesia
Section on Dermatology & Syphilology
Eye, Ear, Nose & Throat Section (2:30 P.M.)
Section on Obstetrics & Gynecology } Joint Meeting
Connecticut Society of American Board Obstetricians & Gynecologists } Joint Meeting
Section on Orthopedics
Section on Physical Medicine
Section on Preventive Medicine & Public Health
Connecticut District Branch—American Psychiatric Association
Section on Radiology
Connecticut Occupational Therapy Association
Connecticut Chapter, American Physical Therapy Association
Hezekiah Beardsley Pediatric Club

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Editorials

In Appreciation To "G.B."

The March 1961 issue of CONNECTICUT MEDICINE is dedicated to Dr. George Blumer in appreciation for all he has done for medicine and particularly for what he has done throughout the years, even up to the present for CONNECTICUT MEDICINE.

Editorials, medical in character but philosophical in nature, have appeared frequently in the past and will continue even in the future, over the initials "G. B."

It is particularly fitting that this issue coincide with the month of his birth and on March 16th, Dr. Blumer will celebrate his eighty-ninth birthday.

Although Dr. Blumer is living his retirement in California, we still regard him as our own because it was here in New Haven, Connecticut that he spent the real years of his medical life.

Having had the distinction to serve in Medicine under Osler, Pathology under Welch and Surgery under Halstead, Dr. Blumer went on to distinguish himself as a clinician, as head of the department of Medicine at Yale Medical School, as an educator, as Dean of the same school and as a writer on medical subjects.

Across the continent we send our grateful appreciation to Dr. Blumer for his long time active interest in CONNECTICUT MEDICINE and our congratulations on his eighty-ninth birthday anniversary.

D. S. O'C.

Adaptation vs. Conformity

Adaptation is not conformity, but there is danger of it becoming so. It is the duty of every physician to clarify the two and see that they are not confused. *Adaptation,* biological and social, can be defined as the "acceptance of the environment in which one finds himself, and the capacity to improve it." *Conformity* means "to make or be like." They are not synonomous. Uniformity of thought and supine dedication to whatever everyone else does or thinks is death to the human spirit and leads to a steady deterioration of society.

The homeostasis of man and society demands a certain degree of physical and mental adaptability. Psychiatrists, ministers, educators and governments teach adaptation as a form of religion, even to the point of destructive conformity, punishing nonconformity as a sin and a crime. The pressures of organized society are in the direction of reducing man to a human robot whose actions are predictable, predetermined and predestinated. When this occurs the spirit of man slowly perishes, no longer able to soar.

In 1949 George Santayana wrote: "I am discovering how much the human world of my time is becoming the enemy of spirit and therefore of its own light and peace." A decade later, this penetrating observation is sadly obvious. *The goal of life is useful happiness,* but we can see all around us that our much-touted high standard of living and our conforming values no longer necessarily pay off in pride, usefulness, and happiness.

Physicians are engineers of Adaptation. They direct and guide the human mind and body toward a responsible, happy acceptance of the world as it is and one's place in it. The medical profession stands for adaptation through choice, not conformity by the force of mis-directed public opinion.

The tremendous population increase, together with accelerated communication and transportation, necessarily enforces rapid adaptability and resultant stresses, which even the best physical organisms and minds find difficult to meet efficiently. Therefore, stress becomes the new factor in disease of both body and mind, as well as the body politic. The physician having conquered bacteria, now rises to meet the challenge of stress—and begins by teaching the principles and techniques of Adaptation.

One finds today in medicine, education, business and even international affairs a disproportionate emphasis on getting along with others. This breeds hypocrisy, the necessity to "get along" with everyone—including the colorless, the dull, the trite, whether an affinity exists or not. Children are taught in school that pleasant communication, good sportsmanship and pleasing others is the ultimate aim; that "getting along," "getting by," and just "getting" is the goal of life. The art of thinking for one's self, of learning for knowledge's sake, of refusing to be parrots and sheep, of resisting ugly social pressures has come to carry the label of "anti-social." The older, coarser epithets having lost their uniqueness, the labels of opprobrium have become "anti-social," "homosexual" and "Communistic."

Conformity not only reduces man to an animal, but frequently to a dangerous animal—a repressed, angry, distorted, insane, or criminal being, or one so defeated that all constructive action becomes impossible. Juvenile delinquency may well be the disease of a conforming, demanding society; it is not natural nor healthy for youth to conform. If the alarming degree of accent on youthful conformity is allowed to continue, society will become stultified and genuine progress will cease. Over-emphasis on conformity results in psychoneurosis, conduct disorders, psychoses and, for the truly defeated, only the death of alcoholism remains.

Man and society must be daringly independent, be willing to withstand the insults and persecution of the masses, be willing to accept personal responsibility for some part of fashioning a good society. We need more people who are capable of being individualists in the best sense of the word which certainly includes the qualities of consideration, understanding and love. In fact, the individualist must be actuated by love and respect for suffering mankind as he advances alone into a new world, opening a pathway for others to follow; he must pause to hold out a helping and understanding hand to those who follow.

Physicians in their position of leadership have an opportunity to teach patients the principles and techniques of adaptation, respecting and understanding each individual personality; their role is to help them toward significant, healthy, happy lives.

Adaptation, yes, but conformity, never!

W. B. T.

Mathematical Biology

Most of us nowadays are aware of the use of mathematics in the physical sciences and in engineering. Even the layman knows that the discoveries of modern physics and the inventions of engineering are to a large extent made by mathematical reasoning. Since World War II the country has become mathematics-conscious. Almost everyone knows that the Atomic Age came into being in 1946 as a result of Einstein's abstruse mathematical speculations in 1905. Fewer persons perhaps know that all our present day electrical power, radio, and television industries are the results of purely theoretical speculations of J. C. Maxwell of a hundred years ago. Einstein was fortunate to live to see the practical results of his theoretical speculations. Maxwell did not live to see any of the practical fruits of his work.

Biology, a much younger science than physics, has until a few decades ago developed as a purely experimental science. Medicine, which stands somewhat in the same relation to biology, as engineering to physics, *a fortiori* remained on a purely empirical level. True enough, mathematics has been used in biology, in the form of biometry and biostatistics, for more than half a century. But this is *not* the speculative mathematics of the theoretical physicist. The statistician uses mathematics in order to evaluate the empirical validity of some observations or to establish *empirically* quantitative relations between different biological quantities. The theoretical physicist uses mathematics in order to infer, from observed facts, about the hidden mechanisms which cause those facts. He attempts to *understand* the "why" of the empirically discovered relations. In most cases, when such an understanding is found, it enables the theoretician to *predict* new, hitherto unknown facts.

During the last three decades a mathematical biology akin in its aims and methods to mathematical physics, has rapidly developed. Most of the earlier work was done at the University of Chicago, where the Committee on Mathematical Biology provides the necessary dual training in both biological and physico-mathematical sciences. In the last decade we find research workers in this field all over the United States and, to a much lesser extent, in Europe. An International Postgraduate Course on Physico-Mathematical Aspects of Biology was held in July 1960 in Varenna, Italy.

What does mathematical biology do and what is its relation, or potential relation to medicine? The mathematical biologist, like the mathematical physicist, makes specific assumptions about the mechanism of a particular biological phenomenon. He formulates those assumptions in mathematical form. Then he derives quantitative mathematical conclusions from those assumptions and compares those conclusions with experimental data. If the agreement is quantitatively good, he knows that his basic assumptions are good. If divergencies are found between theory and experiment, frequently the mathematical reasoning enables us to decide which of the basic assumptions must be modified and in what manner. In this way the mathematical biologist gains an understanding of some ultimate mechanisms of biological phenomena, mechanisms which are frequently inaccessible to direct experimentation.

The range of problems covered by mathematical biology is as wide as the field of biology.[1] Numerous papers, most of them published since 1939 in *The Bulletin of Mathematical Biophysics,*[2] deal with such varied problems as theories of cell division, cell respiration, cell growth, cellular shapes, circulation, blood-tissue exchange, nerve excitation and conduction, reaction times, discrimination, conditioning and learning, Gestalt perception, color vision, abstraction, etc. Much of this work is still on a highly speculative level. In a very large number of cases, however, the speculations have led not only to correct *quantitative* representation of known empirical facts, but also to the prediction of yet unknown relations which were subsequently found experimentally. As examples, H. D. Landahl's work on color vision, or N. Rashevsky's work on neurological models of aesthetic perception, may be mentioned.[1] As shown by the example of physics, one never can tell when even the purest speculations will suddenly lead to "practical" results. Some such results have already been obtained. We may mention the work of H. D. Landahl on the retention of particulate material in the respiratory tract.[3] On the basis of well established physical laws and of the anatomical structure of the respiratory passages the author calculates the percentage of particles contained in the air, which will be retained in the passages before reaching the alveoles. The practical importance of this work for the problem of protection of individuals who work with smokes and other types of aerosols, is obvious.

As another example of interest to the medical man, we may mention the work of L. Danziger and G. Elmergreen on the theory of periodic catatonia.[4] Starting with a set of assumptions about the possible connection of periodic catatonia with endocrine functions, the authors developed an elaborate mathematical theory of the clinical manifestations. The theory not only offers a possible explanation of some aspects of the disease, but also indicates certain therapeutic procedures for its treatment. Clinical applications of the theory were presented at the Third International Congress on Psychiatry in Zurich in September 1957.[5]

All this is still a far cry from the scope of practical applications of mathematical physics. But the above two examples are not the only ones. A number of biological problems investigated by mathematical biologists, point directly or indirectly to possible clinical applications. Mathematical theories of growth of cells and tissues are likely to bear on some aspects of the cancer problem. Problems of blood-tissue exchanges offer other examples of potential clinical interest. The work of Bellman *et. al.* on mathematical aspects of chemotherapy is another example.[6]

At present a great obstacle to the penetration of mathematics into medicine is the relatively small number of medical men with adequate mathematical training. Such men do, however, exist and their number steadily increases. The above mentioned literature on mathematical biology may still possibly be mathematically too technical for most individuals in the profession. A little book, intended for persons with only a limited knowledge of mathematics is now being published.[7] The need to remain on as elementary mathematical level as possible made it necessary to select the topics treated in it not from the point of view of their potential clinical interest, but from the point of view of mathematical simplicity. Another, more voluminous mathematical book, written by an M.D., has just been published.[8]

The pioneers in mathematical biology will probably not live to see wide clinical applications of their work. And yet perhaps they may, because the tempos of scientific developments seem to be increasing considerably.

N. Rashevsky

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One Of Medicine's Finest

American medicine may some day lay claim to having had a real canonized saint arise from among its members—St. Thomas, physician and martyr. It is perhaps a little premature to espouse this hope for such exalted recognition of a man, but Dr. Tom Dooley's life has ended now and it may be said, without question, that he conducted himself as a true Christian during the all too few years given him to serve his fellows.

Like the Master himself, he sacrificed personal comfort and material reward in order to emulate Christ, being the Good Samaritan and the doer of good deeds for "even these, the least of my brethren." Dr. Dooley was bound by no vows to perform his excellent works. Of his own accord, he chose to dedicate his life to those who needed help and the medical profession can justly take pride that one of its own has so truly exemplified the Christian life.

It seems not at all inappropriate for us to venture the opinion that, in less spectacular ways, physicians everywhere are serving in the tradition of this great man and are performing similar deeds of charity and service for the public good.

Tom Dooley's was the true image of the dedicated doctor of medicine, and, if the truth were more widely known, the self-serving detractors of his colleagues could never distort or destroy it.

D. S. O'C.

Auscultation Rediscovered

In a recent series of papers,[1,2,3,4] Feinstein and co-workers have advanced an hypothesis at variance with established concepts of rheumatic heart disease. The re-examination of ideas that have been held to be almost axiomatic in the light of new techniques and fresh observations is an important aspect of scientific progress and a sometimes neglected component of scientific method.

Our thinking about rheumatic fever has classified each victim of the disease as a potential cardiac, since many patients who apparently escape demonstrable valvular involvement during acute episodes of rheumatic fever are eventually found to have valvular heart disease. Those patients who developed subsequent heart disease many years later could not be distinguished from those who escaped such involvement. As Feinstein points out,[3] this concept, which holds almost axiomatic status in clinical medicine, may suffer from errors of both omission and commission. In the first place, although pathologists have assembled much data on patients with histories of acute rheumatic fever who show evidences of heart disease at autopsy, little information is available about those with similar histories who die without stigmata of valvular involvement. The second group of errors,[2] the failure to hear and to recognize significant murmurs during acute attacks, have to do with a host of factors involving the fallibility of auscultatory examination. An important one of these may be the uncritical acceptance of the findings of other examiners. These errors of commission, it is suggested, may be overcome by repeated examinations by several observers.

In the light of these ideas Feinstein has grouped his patients at Irvington House into three categories based on the stethoscopic findings during episodes of acute rheumatic fever.[1] Those patients exhibiting at least one diastolic murmur not heard previously were designated as having "valvulitis." The "probable valvulitis" group presented either a long systolic murmur loudest at the apex and transmitted to the left axillary area or a questionable diastolic murmur in association with an apical systolic murmur. Those patients who failed to meet the criteria for either of these groups were classified as having "no valvulitis," despite the presence of other systolic murmurs, abnormalities of the PR and QT intervals, gallop rhythm, and roentgenographic evidence of borderline cardiac enlargement.

In a series of 427 patients, observations at the end of two to nine years showed that clinical evidence of rheumatic heart disease was present in 67 per cent of the "valvulitis" group, 25 per cent of the "probable valvulitis" group, and none of the "no valvulitis" group. In an analysis of 161 patients with 370 recurrent attacks of acute rheumatic fever,[4] the likelihood of developing valvulitis in subsequent attacks when there was none in the first was found to be small.

These data refer to a relatively small number of cases and a relatively short period of observation. However, they suggest that the predictive value of careful and repeated auscultation in acute rheumatic fever is much more significant than has been previously realized. If these observations can be confirmed, a more intelligent basis for estimating which patients will develop heart disease, and indeed require antistreptococcal prophylaxis, will become available. The importance of periodic re-evaluation of quasi-axiomatic statements in the light of logical analysis of methodology and new observations and techniques is pointed up by these studies.

H. L.

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Fifth International Congress On Nutrition

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An event of considerable significance in the field of nutrition was the week-long Fifth International Congress on Nutrition held in Washington in early September, 1960. Probably no area in the health field has made as much progress in research and its application to the well-being of mankind as has been made in the field of nutrition in this century. The program of the Fifth International Congress on Nutrition not only pointed out this progress but indicated the directions in which we need further endeavor.

One of the main sessions was a panel on the Evaluation of the Nutritional Status in Man. Among the many factors involved are agriculture, economics, education, habits and mores, and general level of health. For an adequate evaluation of nutritional status dietary, biochemical, and clinical data are collected. Each measures certain aspects; the dietary the present state of intake, the biochemical the recent past intake; and the clinical findings the longer past and its effects. A correlation among the data from these three approaches may indicate the nutritional problems of the population under study and the areas in which concerted effort is needed to improve the health of the population in question. Considerable work has been done in this whole area by the Interdepartmental Committee on National Defense, known as ICNND. Standardization of procedures and evaluations has been developed which has made it possible to compare the various surveys. Where surveys have been done very tangible results have come from the recommendations made. One of the most valuable is the development of foods of local origin to meet the nutritional needs of the country. Thus food products of vegetable origin or fish origin have been devised which are acceptable and make a real contribution to the diet, particularly the protein intake, one of the most common deficiencies noted. The protein deficiency diseases, kwashiorkor and marasmus, of concern especially in the underdeveloped countries of the world, were reviewed extensively in several papers.

The role of amino acid balance or "ideal aminogram" needed for proper growth and maintenance of the body and the significance of the protein reserve were subjects for considerable discussion as was the significance of nitrogen balance as an indicator for determining protein requirement.

The controversial subject of the relationship of lipids to atherosclerosis was reported in some detail. The relationship among such factors as lipid metabolism derangements, amount and type of fats in the diet, serum cholesterol levels and the factors influencing it, and the role of hormones, especially estrogens, were presented. It was, however, the opinion of the panel that in spite of the evidence it was not yet time to make recommendations which would attempt to change the dietary habits of the population in regard to total fat calories as well as the proportion of saturated to unsaturated fatty acids in the diet.

The recommended daily dietary allowances during pregnancy came up for some fairly sharp evaluation. The practice of basing the dietary allowances for pregnancy on that for non-pregnant women was questioned. It is apparent that there is a wide degree of adaptation to intake above that required for minimum or maintenance needs. Reports of data collected in Asian and African countries point up the need to determine, if possible, just what is optimum nutrition not only for pregnant women, but for all groups of the population.

The importance of breast feeding for infants was emphasized. The composition of human breast milk is more suited to the infant, while the ease and lack of cost of breast feeding are other factors to be considered. In spite of these advantages, in this country breast feeding is done by less than one-fourth of the mothers, while in many other areas of the world it is practiced 100 per cent for as much as a year or more of the infant's life. It was voted that in many areas the ability to lactate was inversely related to socio-economic status.

Only these few of the many topics discussed can be mentioned here. Although there have been many accomplishments in the field of nutrition in the past decades, the unanswered problems challenge us to even greater endeavor for the health and welfare of mankind.

This article prepared at the request of and approved by the Sub-Committee on Nutrition of the Committee on Public Health of the Connecticut State Medical Society.

THE PRESIDENT'S PAGE

Every organization should undergo detailed structural and functional examinations at intervals to determine the health status of the organization just as individuals should undergo periodic health appraisals with similar aims. The purpose of these evaluations is to discover any deficiencies or faults and make corrections designed to increase the organization's effectiveness in the light of current and foreseeable needs and responsibilities.

In 1949, after two years of intensive study, the "Bishop Committee" completed an excellent report which disclosed several weaknesses and deficiencies and gave carefully considered advice designed to improve the effectiveness of the Society. Much of this advice was translated into action to the benefit of the Society, the profession in general and the public. In the late '50s the "Gens Committee" began a thorough re-evaluation and this was continued by the "Murray Committee." Based on the latter committee's report made last month, the Council now presents on pages 182 through 197 in this issue of the JOURNAL, a proposed complete revision of the Society's bylaws.

A most welcome proposal is that which groups related standing committees of the Society into a relatively small number of divisions to minimize overlapping and duplication of work and to provide clear-cut centers of responsibility. This arrangement should greatly increase the effectiveness of our committees and should provide a much-needed coordination of effort. Through well-defined channels of communication, a multi-directional linkage between the House, the Council and the committees should provide the means for swift and efficient response by the Society to rapidly changing needs.

The establishment of an Executive Committee is also a welcome proposal. The relatively large Council has been overburdened with small details. Under the new arrangement it could concentrate its efforts on the more important matters which it is called upon to handle. Despite marathon meetings, the Council has piled up a sizeable backlog of work.

Perhaps most important of all is the spelling-out of many details about which the current bylaws are silent. Upon this foundation, it is hoped that other ground-rules will be added in the near future (for example: details about individual scientific sections). The deficiencies in formally stated ground-rules have been the source of much confusion and wasted time.

All members of the Society can study the proposed new bylaws and make recommendations to their delegates prior to the April 25, 1961 meeting of the House of Delegates. Because the Council wisely recommends that the effective date of the version adopted in April 1961 be a year later, there will be ample time to make other changes at the December 1961 meeting of the House. Then, based on the December 1961 version, the Council will have four months to assemble a carefully selected slate of nominations for presentation to the House when the new bylaws go into effect in the Spring of 1962.

This proposal is based on careful study and sound judgment. The basic organizational blueprint has been drawn with painstaking effort and it does not deserve haphazard spur-of-the-moment piecemeal tinkering. It needs skillful polishing and perfecting with due regard for the compatibility of all components.

The new set of bylaws which becomes effective in 1962 should be an instrument for revitalizing the Society so that it can meet the staggering challenges of the '60s with solid strength and streamlined efficiency.

John N. Gallivan, M.D.

FROM THE GENERAL MANAGER'S OFFICE

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CALL

ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1961 Annual Meeting of the House of Delegates will be held in the auditorium of the Hamden High School, 2040 Dixwell Avenue, Hamden, commencing at 10:00 o'clock in the morning of Tuesday, April 25.

Following luncheon, the House will reconvene for the completion of business.

John N. Gallivan, President
Orvan W. Hess, Secretary
William R. Richards, General Manager

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4 of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the General Manager in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolutions and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

REVISION OF BYLAWS

The Council adopted the following revision of the Bylaws of the Society which shall be presented at the House of Delegates meeting on April 25, 1961, for consideration. At this time, the Council is making no specific recommendations as to when the revised Bylaws, if adopted, should become effective.

CONNECTICUT STATE MEDICAL SOCIETY BYLAWS

ARTICLE I — TITLE AND DEFINITION

The name of this corporation is The Connecticut State Medical Society, Incorporated hereinafter referred to as "The Society". It is a federacy of its component associations.

ARTICLE II — PURPOSES

Section 1. Purposes

The purposes of The Society shall be to federate and bring into one organization the medical profession of the State of Connecticut; to unite with similar societies in other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standards of medical education; to promote friendly intercourse among physicians; and to enlighten and direct public opinion so that the profession shall become increasingly useful to the public in the prevention and care of disease and in prolonging and adding comfort to life.

Section 2. Non-profit Organization

The Society is not organized, and shall never be maintained and conducted for the pecuniary profit of its members, officers, or employees but shall be, and remain, a strictly scientific and educational corporation, and no member, officer or employee of The Society shall at any time receive or be entitled to receive any pecuniary profit from the operation of The Society except a reasonable compensation for services actually rendered.

Section 3. Ethics

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

ARTICLE III — COMPONENT ASSOCIATIONS

Section 1. Component Associations

The county medical associations in the following counties shall be the component associations of The Society: Fairfield, Hartford, Litchfield, Middlesex, New Haven, New London, Tolland, Windham.

ARTICLE IV — MEMBERSHIP

Section 1. Active Members

Active Membership shall be limited to those members of component associations who are certified to the General Manager of The Society as entitled to exercise all rights of membership in their component associations including the rights to vote and hold office. A physician eligible for Active Membership in The Society becomes an Active Member of The Society on receipt by the General Manager of The Society of dues prescribed by The Society unless he is exempted from payment of dues as provided in Article XII. Active Members ceasing to be in good standing or ceasing to be members of their component associations shall ipso facto have the same status in The Society. Any Active Member expelled from his component association or suspended from its rights and privileges shall ipso facto have the same status in The Society but his right of appeal to The Society shall not be impaired.

Section 2. Associate Members

Physicians and others interested in the science of medicine and public health who are not licensed to practice medicine in the State of Connecticut, may be elected as Associate Members in The Society by majority vote of the House of Delegates at any regular or special meeting. Candidates for Associate Membership shall be required to file with the Council a formal application for membership which shall be passed upon by the Council with recommendations to the House of Delegates. Associate Members shall enjoy all of the rights and privileges of The Society except that they may not vote or hold elective office; they may be appointed to serve upon committees and present papers before The Society or any of its scientific sections.

Section 3. Honorary Members

Eminent physicians may be elected Honorary Members by majority vote of the House of Delegates in accordance with Article VII, Section 1. Honorary members shall not pay dues to The Society or vote or hold office.

Section 4. Life Members

Any member of The Society who has been an Active Member of The Society or of the American Medical Association or of constituent associations of The American Medical Association for forty consecutive years or who has reached his sixty-eighth birthday anniversary and has been an Active Member of The Society or of the American Medical Association for fifteen or more years immediately preceding said anniversary or any Active Member of The Society who becomes totally and permanently disabled shall be eligible for Life Membership. A physician eligible for Life Membership may apply for such membership to the General Manager of The Society and shall become a Life Member on approval by the Council of such application. Life Members shall not be subject to dues or assessments but shall be accorded all the rights and privileges of active membership in The Society including the rights to vote and hold office.

Section 5. Student Members

Any person whose legal or family residence is in the State of Connecticut who is a regularly enrolled student and a candidate for the degree of Doctor of Medicine in an acceptable medical school, as provided in Section 20-11 (1959) of the General Statutes of Connecticut, or any person who is a student in an acceptable medical school located in the State of Connecticut may become a Student Member of The Society. Also, physicians not licensed to practice medicine in Connecticut who are serving as interns or residents in hospitals in Connecticut, for the purpose of extending their education and not primarily for remuneration, may become Student Members of The Society. Such membership shall be obtained by applying to the Council of The Society on a form provided for that purpose and election by vote of a majority of the Council. Student Members shall enjoy all of the rights and privileges of membership in The Society except that they shall not be eligible to vote or hold office. Student Members shall pay no dues.

Section 6. Limitation To One Membership

A member shall hold only one type of membership in The Society at any one time.

ARTICLE V — HOUSE OF DELEGATES

Section 1. Powers And Duties

The superintendence and management of The Society is vested in the House of Delegates. The House of Delegates has the powers provided by the Charter of The Connecticut State Medical Society, as amended, which include the power to make such bylaws and regulations for the due government of The Society as may be deemed necessary. The House of Delegates is the legislative body of the Association. The House elects the general officers and certain boards and committees to conduct some of The Society's affairs but delegates to the Council all powers necessary to act as the executive and administrative body of The Society while the House of Delegates is not in session. Boards and committees elected by the House of Delegates shall be supervised by the Council between meetings of the House and shall make written reports through the Council to the House. The House of Delegates may provide for a division of the Scientific Assembly of The Society into sections for the presentation and discussion of subjects pertaining to the science and art of medicine, may make rules and regulations for the conduct of such sections, may create new scientific sections and may discontinue any existing scientific section.

Section 2. Composition

The House of Delegates shall be composed of: (a) delegates elected by the component associations according to the apportionment provided in Section 4 of Article V of these Bylaws; (b) those members of the Council who are eligible to vote in the Council; (c) the chairman of each divisional board. Past-Presidents of The Society shall be life members of the House of Delegates with the right to vote. The General Manager, the Editor of Connecticut Medicine and any active member of The Society currently serving as a Director of Connecticut Medical Service, Inc., shall be ex-officio members of the House of Delegates without the right to vote.

Section 3. Eligibility

In order to be eligible for membership in the House of Delegates, a physician must have been an Active Member of The Society for at least the two years immediately preceding the session of the House in which he is to serve.

Section 4. Apportionment

The number of delegates from the component associations shall be proportional to the number of Active Members of the Connecticut State Medical Society in the respective county associations. Each component association shall be entitled to send from its membership to the House of Delegates each year one delegate for every thirty-five, or fraction thereof, Active Members and Life Members of the Connecticut State Medical Society as recorded in the office of the General Manager of The Society on December 31 of the immediately preceding year.

Section 5. Registration

Par. 1. Certification. Before being seated at any annual, semi-annual or special session of the House of Delegates, each member shall deposit with the Reference Committee on Credentials a certificate signed by the president or secretary of the component association or the General Manager of The Society stating that the member is entitled to be seated in the House of Delegates on the basis of regular election, appointment or ex-officio status.

Par. 2. Vacancies. When an elected delegate from a component association and his elected alternate are unable to attend a specified session, the appropriate authorities of the component association concerned may appoint in accordance with the bylaws of that component association a substitute delegate and a substitute alternate. A substitute delegate or his alternate may be seated by the Reference Committee on Credentials provided he has been an active member of the Connecticut State Medical Society for at least two years immediately preceding the session of the House in which he is to serve and provided he is properly identified as the substitute delegate or substitute alternate selected by the appropriate authorities of the component association concerned.

When a chairman of a divisional board of The Society is unable to attend a specified session, he may authorize in writing a member of the respective board to substitute for him at that session.

Section 6. Status After Seating

A delegate whose credentials have been accepted by the Reference Committee on Credentials and whose name has been placed on the roll of the House shall remain a delegate until the final adjournment of that meeting of the House of Delegates. If a delegate, once seated, is unable to be present on account of sickness or any other emergency his place may be taken by an alternate as approved by the Reference Committee on Credentials. After the alternate has been seated he cannot be replaced.

Section 7. Regular Meetings

The House of Delegates shall meet annually during the week of the Scientific Assembly of The Society at the time and place designated by the Council. The House of Delegates shall hold one semi-annual meeting at the time and place designated by the Council. The order of business at each annual and each semi-annual meeting shall be that arranged by the Speaker of the House of Delegates and approved by the Council. Business that may properly come before an annual meeting may be considered at a semi-annual meeting subject to the provisions of the Bylaws.

Section 8. Special Meetings

Special meetings of the House of Delegates shall be called by the Speaker of the House of Delegates on written request of twenty-five or more delegates elected as delegates by and from component associations, or on written request of a majority of the members of the Council eligible to vote in the

Council. When a special meeting is thus called, the General Manager shall mail a notice to the last known address of each member of the House of Delegates, at least ten days before the special meeting is to be held. The notice shall specify the time and place of meeting and the purpose for which the meeting is called. No business shall be considered at a special meeting except that for which it was called.

Section 9. Open And Closed Sessions

Every regular or special meeting of the House of Delegates shall be an open session to which any person may be admitted as an observer, unless by majority vote of the seated delegates a portion of the meeting is moved into a closed session. A closed session shall be restricted to members of The Society, to members of the staff of The Society or the staff of a component association, to official delegates from other medical societies, and to such other persons as may be admitted by majority vote of the House.

Section 10. Executive Session

By two-thirds vote of the seated delegates, a portion of any meeting may be moved into executive session. An executive session shall be limited to members of the House of Delegates as defined in Sections 2, 5 and 6 of Article V of the Bylaws and to such employees of The Society as the Speaker deems necessary for the functioning of the House during the executive session.

Section 11. Quorum

A quorum at any meeting of the House of Delegates shall consist of a majority of the sum of the number of delegates to which all component associations are entitled in accordance with Section 4 of Article V of the Bylaws plus the number of members of the Council eligible to vote in the Council.

Section 12. Resolutions

All resolutions to be considered as regular business at any regular meeting of the House of Delegates must be in the hands of the Speaker not later than seventy-two hours before the opening of that meeting. All resolutions and recommendations published in the official agenda distributed to the members of the House prior to the meeting at which action is to be taken shall be considered as regular business. Resolutions presented later than seventy-two hours before the opening of a meeting will be referred for consideration as regular business by the House only when they are presented by the Council or accepted for consideration by majority vote of the delegates present. Any resolution which does not qualify in accordance with the aforesaid provisions for consideration as regular business may be accepted for action by a majority vote of the delegates present and, if so accepted, shall be referred at once by the Speaker to a reference committee. Any such reference committee shall consider resolutions referred to it and shall report, with recommendations, to the House before adjournment of the meeting.

Section 13. Reference Committees

The Speaker of the House of Delegates shall appoint from the members of the House such reference committees as the House may approve. Each committee shall consist of five members. The chairman shall be appointed by the Speaker. These committees shall serve only during the meeting at which they are appointed.

Section 14. Referendum

The House of Delegates at any meeting may, by a two-thirds vote of the members seated in the House, submit any question pending before it to a general referendum of active members of The Society who may vote by mail or in person and, if the members voting shall comprise a majority of the active members of The Society, a majority of such vote shall determine the question and the result shall be binding on the House of Delegates.

ARTICLE VI — GENERAL OFFICERS

Section 1. Designations

The general officers of The Society shall be a President, a President-Elect, a Vice-President, a Secretary-Treasurer, a Speaker of the House of Delegates, a Vice Speaker of the House of Delegates and the delegates to the American Medical Association.

Section 2. Qualifications

A general officer must have been, for at least two years immediately preceding his election, an Active Member of The Society. The Speaker and Vice Speaker of the House shall be elected from among the members of the House.

Section 3. Term Of President-Elect

The President-Elect shall be elected annually by ballot by the House of Delegates. He shall serve as President-Elect until the annual meeting of the House of Delegates next ensuing after his election and shall become President upon his installation in the course of that annual meeting serving thereafter as President until the installation of his successor.

Section 4. Terms Of Other General Officers

PAR. 1. ELECTION. The Vice-President, the Secretary-Treasurer and the Speaker and Vice Speaker of the House of Delegates shall be elected annually by ballot by the House of Delegates, each to take office immediately after the adjournment of the annual meeting at which he is elected and each to serve for one year or until his successor is installed. The House of Delegates shall elect by ballot delegates and alternate delegates from The Society to the House of Delegates of the American Medical Association in accordance with the constitution and bylaws of that body. These delegates and alternates shall take office on the first of January following their election and shall serve terms of two years.

PAR. 2. VACANCIES. In the event of a vacancy in the office of Secretary-Treasurer or Vice Speaker or delegate or alternate delegate to the American Medical Association, the Council shall fill the vacancy by appointment of an Active Member of the Society to serve until the next regular meeting of the House of Delegates at which a successor shall be elected.

Section 5. Successor To The President

If the President dies, resigns or is removed from office, the President-Elect shall immediately become President and shall serve for the remainder of the term of his immediate predecessor. If said remainder of the term served is less than six months, he shall also serve as President until the second annual meeting of the House of Delegates following his election as President-Elect. If a President-Elect succeeds to the Presidency six months or more before the following annual meeting of the House of Delegates, he shall serve thereafter as President until the installation of his successor.

Section 6. Successor To The President-Elect

If a vacancy occurs in the office of President-Elect less than six months before the following annual meeting of the House of Delegates, the Vice-President shall immediately become President-Elect and shall serve as President-Elect until the second annual meeting of the House of Delegates following his election as Vice-President at which meeting he shall become President upon his installation in the course of that meeting serving thereafter as President until the installation of his successor. If a vacancy occurs in the office of President-Elect six months or more before the following annual meeting of the House of Delegates, the Vice-President shall immediately become President-Elect and shall serve as President-Elect until the next ensuing annual meeting of the House of Delegates at which meeting he shall become President upon his installation in the course of that annual meeting serving thereafter as President until the installation of his successor.

Section 7. Acting President

If a vacancy occurs in the office of President and there are simultaneous vacancies in the successor offices defined in Article VI, Sections 5 and 6, the Secretary-Treasurer shall assume the duties of the office of President; the Speaker of the House of Delegates shall forthwith call a special meeting of the House of Delegates for the purpose of electing a President, a President-Elect and a Vice-President for the remainder of the terms; and the Secretary-Treasurer shall serve as Acting President until said three officers elected at that special meeting are installed in the course of that special meeting.

Section 8. Duties Of The President

The President shall preside at all meetings of the Society except the Council. He shall be ex-officio member of all committees. He shall appoint all committees not otherwise provided for in these Bylaws, subject to confirmation by the Council. He shall visit the component medical associations. He shall perform such other duties as the House of Delegates or the Council shall direct.

Section 9. Duties Of The President-Elect

The President-Elect shall aid and assist the President and shall officiate for the President during his absence or at his request.

Section 10. Duties Of The Vice-President

The Vice-President shall aid and assist the President-Elect and shall officiate for the President during the absence of both the President and President-Elect or at their request.

Section 11. Duties Of The Secretary-Treasurer

The Secretary-Treasurer, in addition to the rights and duties ordinarily devolving on the secretary and the treasurer of a corporation by law or custom and those granted or imposed in other provisions of the Charter and these Bylaws, shall supervise the receipt of all funds due The Society and bequests and donations made to The Society and shall allocate funds as directed by the Council. The Secretary-Treasurer shall give bond in a sum and manner of bonding prescribed by the Council. The Secretary-Treasurer shall make a report to the Annual Meeting of the House of Delegates.

Section 12. Duties Of The Speaker

The Speaker of the House of Delegates shall preside at all regular and special meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. He may address the House of Delegates at the opening of any meeting of the House of Delegates, limiting his address to matters of conduct and procedure in the House of Delegates. He shall have the right to vote in the House of Delegates only in case of a tie.

Section 13. Duties Of The Vice-Speaker

The Vice-Speaker shall aid and assist the Speaker and shall officiate for the Speaker during his absence or at his request. In case of death, resignation or removal of the Speaker, the Vice-Speaker shall immediately become Speaker and shall serve for the remainder of the term of his immediate predecessor. Except when he is officiating for the Speaker, the Vice-Speaker shall have full voting rights in the House of Delegates.

ARTICLE VII — THE COUNCIL

Section 1. Powers And Duties

PAR. 1. GENERAL. The Council shall be the executive and administrative body of The Society while the House of Delegates is not in session and shall control all arrangements for all meetings of The Society.

PAR. 2. CHAIRMAN. The Council shall annually elect from its membership a chairman who shall preside at all meetings of the Council. In his absence, the President shall preside.

PAR. 3. FINANCES. The Council shall be the finance committee of The Society and shall superintend and direct all financial transactions of The Society. The Council shall prepare and submit annually to the House of Delegates a budget for the operation of The Society.

PAR. 4. CENSORSHIP. The Council shall be the Board of Censors of The Society. It shall consider all questions involving the rights and standing of members, in relation to other members, to the component associations, or to this Society. All questions of an ethical nature brought before the House of Delegates or a general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of component associations on which an appeal is taken, and its decision in all such matters shall be final.

The Council shall serve as a board of review for cases of claimed malpractice referred to it by the Committee on Medical Ethics and Deportment of any component county association.

PAR. 5. HONORARY MEMBERS. The Council may present annually to the House of Delegates the names of not more than three eminent physicians as candidates for Honorary Membership in The Society.

PAR. 6. HONORARY DEGREES. The Council may recommend to the House of Delegates the bestowal of an Honorary Degree in medicine upon any person not a physician, distinguished in the sciences of medicine or for contribution to human welfare.

Par. 7. Nominations. The Council shall be the Nominating Committee of The Society. The President shall be the chairman of the Nominating Committee. The Nominating Committee shall report its nominations to the first session of each annual meeting of the House of Delegates; following this report nominations may be made from the floor.

Par. 8. Annual Report. The Council shall make an annual report to the House of Delegates.

Par. 9. Student Members. The Council shall elect Student Members of The Society.

Par. 10. Employees. The Council shall have power and authority to employ, discharge, arrange duties, and fix compensation of and for any employee whom it may find necessary for conducting the affairs of The Society.

Par. 11. Counsel. The Council shall employ legal counsel or a legislative agent subject to the rules and regulations of the House of Delegates.

Par. 12. Special Appointments. The Council annually shall appoint fourteen members of the Society to serve on a Panel for Physician-Hospital Mediation (House of Delegates, December 6, 1960). Appointments shall be made as follows: One member each from the component associations for the counties of Litchfield, Middlesex, New London, Tolland and Windham, and three members each from the component association for the counties of Fairfield, Hartford and New Haven. From this Panel, the President of the Society, on request, shall appoint a sub-panel of three members who have no connection with the case to be mediated, either by reason of location or type of practice, hospital affiliation, personal association or other pertinent consideration, which sub-panel shall review and assist in resolving disagreements between members of the Society and hospital administrations wherein disagreement persists after the procedures recommended by the Joint Commission on the Accreditation of Hospitals or their equivalent have been carried out. Each such panel, when appointed shall have access to all necessary and desirable legal counsel upon authorization by the Council.

Section 2. General Manager

Par. 1. Appointment. The Council, in carrying out its responsibility for conducting the affairs of The Society under the policy directives and limits laid down by the House of Delegates, shall appoint a General Manager to administer the affairs of The Society.

Par. 2. Duties. The General Manager shall exercise all such powers, shall carry out all such duties, and shall observe all such directions and restrictions as the Council or the executive committee of the Council may from time to time impose upon him, but in default thereof the General Manager shall manage and supervise the ordinary affairs and business of The Society, and do any and all acts and things necessary or conducive to such management. The duties of the General Manager shall include but not thereby be limited to the following:

a) To manage The Society's office, grounds, equipment and other property.

b) To employ such assistance as may be approved by the Council and to supervise all employees of The Society.

c) To maintain membership and biographical records.

d) To collect The Society dues except from the members of any component association which collects The Society dues.

e) To collect American Medical Association dues from all members of The Society who are members of the American Medical Association.

f) To make necessary business arrangements including those for commercial exhibits.

g) To record attendance and proceedings, and maintain records of all meetings of the House of Delegates, the Clinical Congress, the Council, the executive committee of the Council, and committees of the Society.

h) To maintain The Society's financial records in cooperation with the Secretary-Treasurer, The Society's bankers and auditors.

i) To pay authorized expenditures from funds allocated by the Secretary-Treasurer.

j) To conduct the official correspondence of The Society including notifying members of meetings, officers of their election and committees of their appointment and duties.

k) Provide guidance services to physicians seeking professional placement in Connecticut.

l) To maintain working contact and cooperation with the component associations of The Society and with the Woman's Auxiliary.

m) To maintain active liaison with State government agencies.

n) To maintain active liaison with the headquarters of the American Medical Association.

o) To maintain active liaison with voluntary health agencies serving Connecticut.

p) To implement and coordinate the activities of The Society with respect to legislative programs.

q) To implement and coordinate The Society's public relations and publicity programs.

r) To aid and assist the officers, boards and committees of The Society in the performance of their powers and duties.

Section 3. Executive Committee

Par. 1. Membership. The Council shall establish an executive committee to be composed of the President, the Secretary-Treasurer, the Chairman of the Council, and three additional members elected by the Council from the membership of the Council. The President-Elect shall be first alternate and the Vice-President shall be second alternate to serve on the executive committee during the absence of the Chairman of the Council, President or the Secretary-Treasurer. The Council shall elect a first, a second, a third and a fourth alternate from the membership of the Council to serve on the executive committee during the absence of any member of the executive committe other than the President or the Secretary-Treasurer. The chairman of the executive committee shall be the Chairman of the Council, or in his absence, the President. The Council shall elect the three additional members of the executive committee and their four alternates at the first meeting of the Council following the annual meeting of the House of Delegates and, in the event any vacancy occurs, shall fill the vacancy at any meeting of the Council.

Par. 2. Duties. The executive committee shall make such preparations and preliminary studies as will expedite the business of the Council, shall take such action as may be required in case of emergency arising in the interim between the meetings of the Council in order to protect the interests and purposes of The Society as set forth in the Charter and these Bylaws, and shall perform such other duties as the Council shall direct.

Section 4. Liaison Committee With CMS

The Council shall name a Liaison Committee with the Board of Directors of the Connecticut Medical Service, Inc., which shall meet in joint conferences with a similar Liaison Committee of the Board of Directors of Connecticut Medical Service, Inc. with the object of promoting cordial and effective liaison between The Society and the Connecticut Medical Service, Inc. Through the medium of such joint conferences, there shall be prior review of any proposed new CMS subscribers' contracts and contracts with CMS participating physicians and prior review of any proposed major changes in the bylaws of Connecticut Medical Service, Inc., to the end that The Society and Connecticut Medical Service, Inc. shall operate, as far as possible, in mutual harmony and agreement.

Section 5. Composition

The Council shall consist of the General Officers, any active member of The Society who is serving as a general officer of the American Medical Association as defined in Section 1 of Article VII of the Constitution of that Association during his tenure as such general officer, one Councilor and one Associate Councilor from each component association, and, from each component association with a membership of over 750 members, one additional Associate Councilor, and the Councilor-at-Large. The General Manager, the Editor of Connecticut Medicine and any active member of The Society who is serving as a Director of Connecticut Medical Service, Inc., during his tenure as such Director may participate, ex-officio and without the right to vote, in meetings of the Council.

Section 6. Terms Of Council Membership

Par. 1. General Officers. The terms of membership in the Council of the general officers of The Society, the Editor of Connecticut Medicine, and any general officer of the American Medical Association shall be the terms of their offices as defined in these Bylaws.

Par. 2. Councilors and Associate Councilors. In the even numbered years, beginning in 1962, a Councilor shall be elected at the annual meeting of each of the component associations for the counties of Fairfield, Litchfield, New Haven and Tolland and an Associate Councilor shall be elected at the annual meeting of each of the component associations for the counties of Hartford, Middlesex, New London and Windham, which Councilors and Associate Councilors shall be selected for two-year terms and shall assume office immediately after the adjournment of the annual meeting of the House of Delegates that follows their selection. In the odd numbered years, beginning in 1963, a Councilor shall be elected at the annual meeting of each of the component associations for the counties of Hartford, Middlesex, New London and Windham and an Associate Councilor shall be elected at the annual meeting of each of the component associations for the counties of Fairfield, Litchfield, New Haven and Tolland, which Councilors and Associate Councilors shall be selected for two-year terms and shall assume office immediately after the adjournment of the annual meeting of the House of Delegates that follows their selection. *EXCEPTION:* In the year 1962 *only,* the four component associations which elect a Councilor for a two-year term shall also elect an Associate Councilor for a one-year term; and in the year 1963 *only,* the four component associations which elect a Councilor for a two-year term shall also elect an Associate Councilor for a one-year term.

Par. 3. Additional Associate Councilors. Following the effective date of these Bylaws, each county association with a membership of 750 or more shall elect forthwith one additional Associate Councilor, which Associate Councilor shall be selected for either a one-year or a two-year term, in accordance with the *EXCEPTION* for election of Associate Councilors outlined in Article VII, Section 6, Par. 2, and shall assume office immediately following his selection. Thereafter, these additional Associate Councilors shall be elected in accordance with the provisions for election of Associate Councilors outlined in Article VII, Section 6, Par. 2.

Par. 4. Councilor-at-Large. At the annual meeting of the House of Delegates, one Councilor-at-large shall be elected from among the voting members of the House for a term of one year, which Councilor-at-large shall assume office immediately after the adjournment of the annual meeting of the House of Delegates at which he was selected.

Par. 5. Limitations of Tenure. No Councilor or Associate Councilor elected by a component association shall serve more than three successive terms of two years each in his respective office, but after a lapse of one term of two years such Councilor or Associate Councilor shall be eligible for reelection.

Par. 6. Vacancies. Any vacancy in the office of Councilor or Associate Councilor from a component association shall be filled by that component association. Any vacancy in the office of Councilor-at-large shall be filled by the Council by appointment of a member of the House of Delegates to fill the unexpired portion of the term.

Section 7. Meetings

Par. 1. Regular and Others. The Council shall meet immediately after the adjournment of the annual meeting of the House of Delegates and at this meeting of the Council shall elect a Chairman, an Executive Committee and a Liaison Committee with CMS in accordance with Sections 3 and 4, respectively, of Article VII of these Bylaws and shall conduct such other business as may be necessary. The Council shall meet at regular intervals at times and places that shall be fixed by the Chairman of the Council. Notice of each regular meeting shall be given at least ten days before each such meeting. Any four voting members of the Council may require the Chairman of the Council to call a meeting for such time and place as shall be designated by them in writing provided, however, that members of the Council must receive at least five days notice of such meeting by letter or telegram from the Chairman of the Council.

Par. 2. The President shall preside at the organization meeting of the Council until the Chairman is elected.

Par. 3. Quorum. Ten voting members of the Council, which shall include four Councilors or Associate Councilors elected by four component associations, shall constitute a quorum for the transaction of business.

Section 8. Power To Fill Vacancies

The Council shall have power to fill any vacancy which may occur in any elective office, board, or committee, for which the power to fill such vacancy is not otherwise provided, until the next regular meeting of the House of Delegates.

Section 9. Policy Initiation Or Commitment

No officer or board or committee or section or employee shall inaugurate or initiate or commit The Society to any policy unless the same has been expressly approved by the House of Delegates or the Council.

ARTICLE VIII — SCIENTIFIC ASSEMBLY

Section 1. Definition

The Scientific Assembly of The Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine.

Section 2. Meetings

Par. 1. General. General meetings of the Scientific Assembly shall be held annually. General meetings of the Scientific Assembly shall be arranged by the Council which shall select the persons to preside.

Par. 2. Sections. Sections of the Scientific Assembly may be created or existing sections discontinued in accordance with Section 1 of Article V of these Bylaws. The officers of each section shall be a chairman, a secretary and such other officers as the section may deem advisable, each to be elected by the section during the course of the annual meeting of the Scientific Assembly to serve for one year. Each section shall meet during the course of the annual meeting of the Scientific Assembly and at such other times as the section may deem advisable. The officers of each section shall arrange the program of the meetings of the section in accordance with the rules and regulations of the House of Delegates and the Council. Only Active Members and Life Members of The Society shall vote or hold office in a section of the Scientific Assembly.

Section 3. Registrants

Par. 1. General Meetings. The following shall be permitted to register at any general meeting of the Scientific Assembly subject to rules and regulations of the House of Delegates and the Council:

A) Members of The Society—Active, Associate, Honorary, Life and Student Members.

B) Delegates to The Society from constituent associations of the American Medical Association.

C) Guests invited by the House of Delegates, the Council, The General Manager, general officers or officers of a section.

D) Residents and interns who are certified for registration by the General Manager.

E) Medical students of approved medical schools who are certified for registration by the General Manager.

Par. 2. Section Meetings. Any section may exclude from its meetings all but duly registered members of the section when the section is electing officers or conducting business of the section.

Section 4. Quorum

A quorum at any general meeting or section meeting of the Scientific Assembly shall be those present at a duly called meeting or, in the case of a section, the number or proportion designated by the section.

ARTICLE IX — "CONNECTICUT MEDICINE"

Section 1. Election Of Editor

The Council shall elect an Editor of "Connecticut Medicine" to serve until his successor takes office after election by the Council. The Editor shall serve ex-officio as a member of the Council without the right to vote.

Section 2. Powers And Duties Of Editor

The Editor of "Connecticut Medicine" shall exercise all such powers, shall carry out all such duties, and shall observe all such directions and restrictions as the Council or the executive committee of the Council may from time to time impose upon him, but in default thereof the Editor of "Connecticut Medicine" shall manage and supervise the publication of "Connecticut Medicine" with full responsibility for editorial content, advertising sales, and circulation, as well as approval of all printing and paper contracts for the publication. He shall coordinate his activities with those of the General Manager and the latter's office and to that end, he may utilize employees, equipment and facilities of the Society which are under the General Manager's supervision and which are assigned to his service by the General Manager.

Section 3. Finance

The General Manager periodically shall receive from the Secretary-Treasurer prorated portions of the fund allocated to the Editor's office and from such funds the General Manager shall make direct payment of all expenditures necessary for the publication of "Connecticut Medicine". The report of such expenditures shall be included in the report of the Secretary-Treasurer to the House of Delegates at its annual meeting.

ARTICLE X — COMMITTEES OF THE COUNCIL

Section 1. Council Subcommittees

The Council may appoint from time to time ad hoc subcommittees from the membership of the Council to assist in expediting the business of the Council. Such subcommittees shall be discharged by the Council at will. All such subcommittees of the Council shall be discharged automatically upon the adjournment of the annual meeting of the House of Delegates following their creation.

Section 2. Standing Committees Of The Council

Par. 1. Outline. The standing committees of the Council shall be as follows:

A Committee on Arrangements
A Committee on Building Management
A Committee on Employee Pensions and Benefits
A Committee on Investment of Funds
A Committee on Preliminary Study of Censorship Questions
A Committee on Preliminary Study of Nominations

Par. 2. Membership. The members of all standing committees of the Council shall be discharged automatically upon the adjournment of the annual meeting of the House of Delegates following their election.

Par. 3. Committee on Arrangements. The component association of the county in which the annual Scientific Assembly is to be held shall nominate to the Council a Committee on Arrangements. The Council shall elect the committee and the chairman thereof. The Committee on Arrangements shall provide suitable accommodations for general meetings, section meetings and exhibits of the Scientific Assembly. Its chairman shall report an outline of the arrangements to the General Manager for publication in the program.

Par. 4. Committee on Building Management. The Council shall elect a Committee on Building Management which shall make such recommendations to the Council as it deems advisable with respect to the management of The Society's building, offices, grounds, equipment and other property exclusive of funds.

Par. 5. Committee on Employee Pensions and Benefits. The Council shall elect a Committee on Employee Pensions and Benefits which shall make such recommendations to the Council as it deems advisable with respect to salaries, pension and other insurance arrangements, vacations, overtime, bonuses, working conditions, and similar matters affecting employees of The Society to the end that employee morale as related to such matters shall be maintained at as high a level as feasible.

Par. 6. Committee on Investment of Funds. The Council shall elect a Committee on Investment of Funds which shall make such recommendations to the Council as it deems advisable with respect to the investment of The Society's funds. The Secretary-Treasurer shall serve ex-officio as chairman of the committee.

Par. 7. Committee on Preliminary Study of Censorship Questions. When the Council receives a question involving the rights and standings of members, in relation to other members or to the component associations or to The Society, or when a question of an ethical nature is referred to the Council from the House of Delegates, or when an appeal is taken to the Council on a question of discipline affecting the conduct of members or component associations, or when a case of claimed malpractice is referred to the Council by the committee on medical ethics and deportment of a component association, the Council shall elect a Committee on Preliminary Study of Censorship Questions which shall study and review such question or appeal or claimed malpractice case and shall report its findings and recommendations to the Council. Once such committee is elected, it shall serve as a standing committee of the Council.

Par. 8. Committee on Preliminary Study of Nominations. The President of The Society and the Councilor from each component association shall be the Committee on Preliminary Study of Nominations. The President shall be the chairman of the committee; in his absence, the President-Elect shall serve as chairman pro tempore and, in the President-Elect's absence, the Vice-President shall serve as chairman pro tempore. In the absence of the Councilor from any component association, the Associate Councilor from that association may serve in his place. The committee shall study the offices and committee memberships elective by the House of Delegates and shall report to the Council its recommendations as to the nominee for each such office or committee. Following this report, the Council shall name a full slate of nominees and shall report its nominations to the first session of each annual meeting of the House of Delegates.

Section 3. Representatives And Advisors

Par. 1. Outline. The Council shall elect the following committees of representatives or advisors.

Advisory Committee—Cerebral Palsy Association
Advisory Committee on Medicare Plan and Federal Employee Health Benefits Program
Advisory Committee to the State Commissioners of Welfare, Finance and Control
Advisory Committee to Woman's Auxiliary
Conference Committee with Connecticut Bar Association
Conference Committee with Connecticut State Dental Association
Conference Committee with Connecticut Pharmaceutical Association
Conference Committee for the Improvement of the Care of the Patient
Delegates to Connecticut Advisory Council on School Health
Delegates to the Council of New England State Medical Societies
Delegates to Connecticut Nutrition Council
Delegates to State Medical Societies and Special Societies
Representative—Connecticut Advisory Committee on Foods and Drugs
Representatives to Connecticut Health League

Par. 2. Advisory Committee—Cerebral Palsy Association. The Council shall elect annually an Advisory Committee to the Cerebral Palsy Association to consist of not more than five members and appoint the chairman thereof. The purpose of this committee is to serve in an advisory capacity to the United Cerebral Palsy Association of Connecticut in matters relating to medical affairs.

Par. 3. Advisory Committee on Medicare Plan and Federal Employee Health Benefits Program. The Council shall elect annually an Advisory Committee on Medicare Plan and Employee Health Benefits Program and appoint the chairman thereof. The membership on this committee shall be representative of all of the county associations and the major medical specialties. The purposes of this committee are to cooperate with the Office for Dependents' Medical Care of the Department of Defense and Connecticut Medical Service in the operation of the Dependents' Medical Care Act in Connecticut; supervise the medical professional phases of the Plan in Connecticut; determine appropriate fees for medical services not included in the Connecticut Schedule of Allowances; determine matters of policy within the State jurisdiction; and direct the Plan Coordinator in Connecticut. This committee shall also adjudicate individual allowances for procedures whose fees are determined on an individual consideration basis under the Federal Employees Health Benefits Program.

Par. 4. Advisory Committee to the State Commissioners of Welfare, Finance and Control. The Council shall elect annually an Advisory Committee to the State Commissioners of Welfare, Finance and Control to consist of not less than five members and appoint the chairman thereof. The purposes of this committee shall be to advise and assist the commissioners of welfare, finance and control in all matters concerning the medical care and hospitalization of state beneficiaries and to promote and foster cooperative relations between state employed personnel and all members of the medical profession.

Par. 5. Advisory Committee to Woman's Auxiliary. The Council shall elect annually an Advisory Committee to the Woman's Auxiliary of not less than three members and to appoint the chairman thereof. The purpose of this committee is to serve in an advisory capacity to the Woman's Auxiliary of the State Medical Society in matters of general policy, insofar as they relate to the program of the State Medical Society and upon request, to confer with the Auxiliary in the development of this program.

Par. 6. Conference Committee with Connecticut Bar Association. The Council shall elect annually a Conference Committee with the Connecticut Bar Association of not less than five members and appoint the chairman thereof. The purpose of this committee is to confer from time to time with representatives of the Connecticut Bar Association on matters of mutual interest to the medical and legal professions.

Par. 7. Conference Committee with Connecticut State Dental Association. The Council shall elect annually a Conference Committee with the Connecticut State Dental Association of not less than five members and appoint the chairman thereof. The purpose of this committee is to confer from time to time with representatives of the Connecticut State Dental Association on problems of mutual interest to the two professions and bring them into closer relationship in all fields.

Par. 8. Conference Committee with the Connecticut Pharmaceutical Association. The Council shall elect annually a Conference Committee with the Connecticut Pharmaceutical Association of not less than five members and appoint the chairman thereof. The purpose of this committee shall be to provide a continuing conference group between the Connecticut State Medical Society and the Connecticut Pharmaceutical Association for the study of mutual problems and for the integration of purposes and objectives common to both professions in Connecticut.

Par. 9. Conference Committee for the Improvement of the Care of the Patient. The Council shall elect annually three representatives and appoint the chairman thereof to serve on a joint committee for the improvement of the care of the patient, which consists of representatives from the State Medical Society, State Nurses' Association, Connecticut League for Nursing, Connecticut Public Health Association and the Connecticut Hospital Association. The purpose of this committee is to study problems of mutual interest to the medical, nursing and hospital administrative professions with a view to improving the care of hospital patients.

Par. 10. Delegates to Connecticut Advisory Council on School Health. The Council shall elect, in the even numbered years, a delegate and alternate delegate, for a term of two years, to represent The Society on the Connecticut Advisory Council on School Health.

Par. 11. Delegates to the Council of New England State Medical Societies. The Council shall elect annually three delegates to the Council of New England State Medical Societies and designate the chairman thereof. The duties of these delegates shall be to represent the Connecticut State Medical Society at meetings of the New England Council and shall, upon direction of the Council or the House of Delegates, cast one unit vote for The Society on all matters calling for such vote. The chairman is charged with the responsibility of maintaining liaison between the two organizations and with preparing and filing a report of the delegates at each annual meeting of The Society.

Par. 12. Delegates to Connecticut Nutrition Council. The Council shall elect annually two delegates to represent The Society on the Connecticut Nutrition Council.

Par. 13. Delegates to State Medical Societies and Special Societies. The Council shall elect annually two delegates each to the following state societies: Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. The terms of office of these delegates shall be for one year beginning July 1, all except the delegates to New York, whose terms shall expire at the annual meeting of the Connecticut State Medical Society. The Council shall elect annually one delegate each to the Connecticut Hospital Association, the Connecticut Pharmaceutical Association, the Connecticut State Dental Association, and the Connecticut State Nurses Association. The terms of these delegates shall expire at the annual meeting of The Society.

Par. 14. Representative—Connecticut Advisory Committee on Food and Drugs. The Council shall elect annually one representative to serve on the Connecticut Advisory Committee on Food and Drugs.

Par. 15. Representatives to Connecticut Health League. The Council shall elect annually one of three representatives to the Connecticut Health League and appoint the chairman thereof. There shall be three representatives to the Connecticut Health League, each of whom shall serve for three years, and shall be elected in such a manner that the terms of one representative shall expire annually.

ARTICLE XI

DIVISIONAL BOARDS AND COMMITTEES

Section 1. Divisions

In order to strengthen various functions of The Society, to minimize overlapping and duplication of work and to provide clear-cut centers of responsibility, related functions of The Society shall be grouped into divisions as follows:

Education and Hospitals Division
Legislation Division
Medical Economics Division
Publications Division
Public Relations Division
Scientific Activities Division
Socio-Environmental Medicine Division

Section 2. Divisional Boards

Each of the divisions of The Society shall be supervised by a divisional board whose members and chairman shall be selected by the House of Delegates from the active membership of The Society. The membership of each divisional board shall include the chairman of each standing committee of that division and such others as the House of Delegates may deem advisable to select. Each divisional board shall submit annually before March first a written report to the Council for transmittal to the House of Delegates and shall make such other reports at other times as requested by the House of Delegates or the Council.

Section 3. Divisional Standing Committees

The standing committees of the divisions of The Society shall consist of Active Members and Life Members of The Society and shall be as follows:

(A) Education and Hospitals Division
  Advisory Committee to the State Board of Examiners for Nursing
  Committee on Cooperation with the Yale School of Medicine
  Committee on Health Careers
  Committee on Hospitals
  Committee on Medical Education and Licensure
  Committee on Postgraduate Education
  Committee on Program of the Scientific Assembly
  Connecticut Committee on American Medical Education Foundation
(B) Legislation Division
  Committee on State Legislation
  Committee on National Legislation
(C) Medical Economics Division
  Committee on Medical Care of Veterans
  Committee on Medical Economics and Insurance
  Committee on Third Party Payments
(D) Publications Division
  Committee on Publications
  Editorial Committee of "Connecticut Medicine"
(E) Public Relations Division
  Committee on County and Local Public Relations
  Committee on State and National Public Relations
(F) Scientific Activities Division
  Cancer Coordinating Committee
  Committee on Aging
  Committee on Eye Care
  Committee on Maternal Morbidity and Mortality
  Committee on Perinatal Morbidity and Mortality
  Committee on State Blood Bank
(G) Socio-Environmental Medicine Division
  Committee on Accident Prevention
  Committee on Mental Health
  Committee on Occupational Health
  Committee on Public Health
  Committee on Rehabilitation
  Committee on Rural Health

Section 4. Organization And Operation Of Boards And Standing Committees

The chairman of each board and standing committee shall be selected by the House of Delegates. Each board and standing committee shall organize and elect its own vice-chairman, secretary and such other officers as it deems advisable. Each board and standing committee shall have the authority to appoint special subcommittees subject to the approval of the Council for any purpose within the functions of the board or standing committee. Each board or standing committee shall make its own rules to govern its action provided such rules do not conflict with the Charter or these Bylaws nor with rules or resolutions of the House of Delegates or of the Council. The Society headquarters shall be the headquarters of all boards and standing committees. Each divisional standing committee shall submit to its divisional board for transmittal to the Council a budget for the fiscal year. A board or a standing committee shall not expend or contract to expend any money in excess of its appropriation without the consent and approval of the Council. Each divisional standing committee shall submit annually at a time set by its divisional board a written report and shall make such other reports at other times as requested by its divisional board.

Section 5. Duties Of Standing Committees

PAR. 1. ADVISORY COMMITTEE TO THE STATE BOARD OF EXAMINERS FOR NURSING. The Council annually shall nominate to the House of Delegates an Advisory Committee to the State Board of Examiners for Nursing to consist of not less than three nor more than five members and shall nominate the chairman thereof. The function of this committee shall be to study the educational, training and legal requirements for practitioners of nursing in the State of Connecticut, to provide information for members of The Society and for the State Board of Examiners for Nursing on these and related matters, and, as occasion arises, to recommend to the Council and the State Board of Examiners for Nursing procedural or statutory changes designed to maintain a high quality of nursing care in Connecticut.

PAR. 2. COMMITTEE ON COOPERATION WITH THE YALE SCHOOL OF MEDICINE. The Council annually shall nominate to the House of Delegates a Committee on Cooperation with the Yale School of Medicine to consist of not less than three nor more than seven members and shall nominate the chairman thereof. The function of the committee shall be to study the educational program of the Yale School of Medicine, to provide information for members of The Society and for the faculty and governing bodies of the Yale School of Medicine on matters related to this subject, and, as occasion arises, to enlist the support of members of The Society in assisting the Yale School of Medicine in its educational program.

PAR. 3. COMMITTEE ON HEALTH CAREERS. The Council annually shall nominate to the House of Delegates a Committee on Health Careers to consist of not less than eight members and shall nominate the chairman thereof. The function of the committee shall be to endeavor to stimulate and encourage youths of Connecticut to enter into the study of medicine and allied health fields through counseling sessions in conjunction with the Woman's Auxiliary and each component association and through the dissemination of verbal and written information and exhibits to students and teachers in secondary schools. The members of the committee shall be selected to represent every component association of The Society.

PAR. 4. COMMITTEE ON HOSPITALS. The Council annually shall nominate to the House of Delegates a Committee on Hospitals to consist of not less than six members and shall nominate the chairman thereof. This committee shall pursue a continuing study of the relations of the medical profession to the operation of public and voluntary hospitals in Connecticut, shall confer with the State Department of Health and the Connecticut Hospital Association on this and related matters and, when indicated, shall make recommendations to the Council for transmittal to the House of Delegates, the State Department of Health, or the Connecticut Hospital Association.

PAR. 5. COMMITTEE ON MEDICAL EDUCATION AND LICENSURE. The Council annually shall nominate to the House of Delegates an active member of The Society to be proposed to the

Governor of the State of Connecticut for appointment as a member of the Connecticut Medical Examining Board for a term of five years. On or about December first of each year, the General Manager of The Society shall prepare for the signature of the President of The Society a statement informing the Governor of The Society's choice of an active member to be appointed as a member of the Connecticut Medical Examining Board and the President shall cause the signed statement to be delivered to the Governor. When a vacancy occurs on the Connecticut Medical Examining Board and when it is not practical for the appointment to be made by the House of Delegates, the President shall propose to the Governor an active member of The Society for appointment. The Connecticut Medical Examining Board shall constitute The Society's Committee on Medical Education and Licensure and the President of that Board as elected by its members shall be the chairman of the Society's Committee on Medical Education and Licensure. The function of the committee shall be to study the educational and legal requirements for practitioners of medicine in the State of Connecticut, to provide information for the members of The Society on these and related matters, and, when indicated, to recommend to The Society amendments to the statutes designed to maintain a high quality of medical care in Connecticut.

Par. 6. Committee on Postgraduate Education. The Council annually shall nominate to the House of Delegates a Committee on Postgraduate Education to consist of not less than seven members and shall nominate the chairman thereof. The function of the committee shall be to plan and make available programs of postgraduate education for members of The Society, to arrange and conduct the Clinical Congress of The Society, and to cooperate with university and other agencies within the state for the extension of postgraduate education of physicians.

Par. 7. Committee on Program of the Scientific Assembly. The Council annually shall nominate to the House of Delegates one member of the Committee on Program of Scientific Assembly for a term of three years. The program committee shall consist of three members, each serving for a term of three years, and the chairman shall be the member who is serving the final year of his term of office. The function of the committee shall be to arrange the program of the annual meeting of the Scientific Assembly and to submit such program to the General Manager for publication not less than two months preceding the date of the annual meeting of the Scientific Assembly.

Par. 8. Connecticut Committee on American Medical Education Foundation (AMEF). Each component association shall name a Committee on American Medical Education Foundation, the chairman of which shall be an active member of The Society, and the chairman of each such committee, by virtue of his office, shall automatically be a member of the Connecticut Committee on American Medical Education Foundation. In addition to these eight members, the Council annually shall nominate to the House of Delegates an active member of The Society to be chairman of the Connecticut Committee on American Medical Education Foundation. The function of the committee shall be to disseminate information concerning the American Medical Education Foundation, to encourage members of The Society to contribute annually to the AMEF, to inform The Society about the generosity of members of The Society relative to other groups and, when indicated, to make recommendations to The Society on these and related matters.

Par. 9. Committee on State Legislation. Annually, before the fifteenth of January, each component association shall send to the General Manager of The Society its nomination of an active member of The Society to membership on the Committee on State Legislation. The Council annually shall transmit these nominations to the House of Delegates and, in addition to these eight nominees, the Council shall nominate to membership on the committee the delegates to the American Medical Association and shall nominate the chairman of the committee. The function of the committee shall be to study and review proposed state legislation pertaining to the public health and the practice of the healing arts, to consult with The Society's legislative agent and to advise him of the opinion of The Society on proposed or pending legislation, to draft and have introduced into the Connecticut General Assembly appropriate legislation for improving medical care and public health in the state, to advise members of The Society concerning proposed state legislation and to supervise and direct The Society's program with respect to state legislation.

Par. 10. Committee on National Legislation. The Council annually shall nominate to the House of Delegates a Committee on National Legislation to consist of not less than seven members and shall nominate the chairman thereof. The chairman of the Committee on State Legislation and the delegates to the American Medical Association shall serve ex-officio as members of the committee with all rights and privileges. The function of the committee shall be to study and review proposed national legislation pertaining to the public health and the practice of the healing arts, to consult with The Society's legislative agent and to advise him of the opinion of The Society on proposed or pending legislation, to draft and have introduced into the United States Congress appropriate legislation for improving medical care and public health in the nation, to advise members of The Society concerning proposed national legislation and to supervise and direct The Society's program with respect to national legislation.

Par. 11. Committee on Medical Care of Veterans. The Council annually shall nominate to the House of Delegates a Committee on Medical Care of Veterans to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The Committee on Medical Care of Veterans shall be the representative of The Society in all matters pertaining to the medical care of veterans. It shall confer from time to time with agencies concerned with the medical care of veterans, it shall inform The Society concerning the medical care of veterans in this state and related matters and, when indicated, shall recommend to the Council such procedural or statutory changes as it deems advisable.

Par. 12. Committee on Medical Economics and Insurance. Annually each component association shall nominate to the Council for transmittal to the House of Delegates an active member of The Society to serve as a member of the Committee on Medical Economics and Insurance. In addition to these eight nominees, the Council shall nominate not less than three nor more than five members of the committee and shall nominate the chairman thereof. The function of the committee shall be to study any and all of the business aspects of the practice of medicine wherein The Society can be of assistance to its members, to study and review insurance and protective plans designed to protect members of The Society and their families against the hazards of illness or disability, to advise members of The Society concerning these and related matters and, when indicated, recommend to the Council programs of potential benefit to members of The Society which can be inaugurated or endorsed.

Par. 13. Committee on Third Party Payments. The Council annually shall nominate to the House of Delegates a Committee on Third Party Payments to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to study existing and projected systems which provide payment for physicians' services by any public, private or cooperative agency, and to advise The Society concerning them. In its operations, the committee shall confer directly with agencies which have an interest and responsibility in systems that involve payment of physicians by third party agencies but, where other standing committees of The Society have direct relationships such as those of the Liaison Committee with CMS or the Committee on Medical Care of Veterans, the committee shall confer with such other standing committees rather than directly with the agencies involved. The committee shall also maintain active liaison with committees on third party payments of the component associations.

Par. 14. Committee on Publications. The Council annually shall nominate to the House of Delegates a Committee on Publications to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The function of the committee shall be to provide assistance and guidance to the General Manager and his staff concerning all publications of The Society except "Connecticut Medicine". The committee shall not be concerned directly with the business or financial aspects of such publications, which aspects are the responsibility of the General Manager. The committee shall maintain close liaison with the Public Relations Division.

Par. 15. Editorial Committee of "Connecticut Medicine". The Council annually shall nominate to the House of Delegates an Editorial Committee of "Connecticut Medicine" consisting of not more than fifteen members in addition to the Editor and the President who shall serve ex-officio as members with all rights and privileges. The Editor shall serve as chairman of the Editorial Committee. The members of the committee insofar as feasible shall be capable of representing the various specialty divisions of medicine and the various geographic areas of the state. The function of the committee shall be to assist and guide the Editor in the acceptance or rejection of manuscripts for publication and to assist the Editor to maintain a high literary quality in "Connecticut Medicine". The committee shall not be concerned with the business or financial aspects of the publication of "Connecticut Medicine", which aspects are the responsibility of the Editor and the General Manager.

Par. 16. Committee on County and Local Public Relations. Annually each component association shall nominate to the Council an active member of The Society to serve on the Committee on County and Local Public Relations. In addition to these eight nominees, the Council annually shall nominate to the House of Delegates not less than one nor more than five members and shall nominate the chairman of the committee. The function of the committee shall be to assist the committees on public relations of the component associations in developing and disseminating accurate and reliable information concerning matters of public interest in the field of medicine. The committee shall use its efforts to encourage cooperation by the committees on public relations of the component associations with local medical societies, allied professional groups, voluntary agencies, the press, radio, television and other groups within the respective counties in a program of public relations.

Par. 17. Committee on State and National Public Relations. The Council annually shall nominate to the House of Delegates a Committee on State and National Public Relations to consist of eight members and shall nominate the chairman thereof. The function of the committee shall be to inquire into and pass upon such phases of public information as deal with the care of the sick and the practice of medicine, to keep the people of Connecticut accurately and reliably informed concerning matters of public interest in the field of medicine, to encourage cordial relations and understanding with communications media, and to cooperate with other committees of The Society and of the American Medical Association in a program of public relations.

Par. 18. Cancer Coordinating Committee. The Council annually shall nominate to the House of Delegates a Cancer Coordinating Committee. The membership of the committee shall include a chairman, one member from the cancer committee of each general hospital in Connecticut, and shall at all times include the President of the Connecticut Cancer Society and a representative of the State Department of Health. This Committee shall be governed by an Executive Committee designated by the Council, which shall include the chairman, President of the Connecticut Cancer Society, the representative of the State Department of Health, and six members selected from the other membership of the Committee. The purpose of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study, prevention and treatment of cancer in Connecticut, to aid and encourage the establishment and maintenance of high professional standards in the cancer clinics of the general hospitals, and to organize and promote professional education regarding cancer in Connecticut.

Par. 19. Committee on Aging. The Council annually shall nominate to the House of Delegates a Committee on Aging to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of various agencies whose functions may include some phase of the study of the aging processes or the care of the aged, to cooperate with other committees of The Society in the phases of their activities related to aging or the care of the aged, to cooperate with committees of the American Medical Association concerned with this matter, to maintain liaison regarding health problems of the aging with the Connecticut State Dental Society, the Connecticut Hospital Association, the Connecticut Association of Chronic and Convalescent Hospitals and similar organizations, and to develop and make available to members of The Society and all other persons interested in the problems of aging and the care of the aged information on all phases of these and related matters. When indicated, the committee shall recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, statutory changes which the Committee on Aging deems advisable to promote improvements in the care of the aging and aged.

PAR. 20. COMMITTEE ON EYE CARE. The Council annually shall nominate to the House of Delegates a Committee on Eye Care to consist of not more than fifteen members and shall nominate the chairman thereof. The membership of the committee shall include not less than four but not more than seven members of the Executive Committee of the Eye, Ear, Nose and Throat Section of the Scientific Assembly and shall include the advisors from The Society to the Public Relations Committee of the Section on Ophthalmology of the American Medical Association. The function of the committee shall be to coordinate and integrate the efforts of various agencies whose functions may include some phase of eye care, to cooperate with other committees of The Society in the eye care phases of their activities, to cooperate with committees of the American Medical Association concerned with the promotion of eye care, to develop and disseminate to members of The Society and other interested persons information on various phases of eye care and, when indicated, recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, statutory changes designed to promote improvements in eye care within the state.

PAR. 21. COMMITTEE ON MATERNAL MORBIDITY AND MORTALITY. The Council annually shall nominate to the House of Delegates a Committee on Maternal Morbidity and Mortality to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of maternal morbidity and mortality in Connecticut, to aid and encourage the establishment and maintenance of high professional standards in prenatal and obstetrical care, and to organize and promote professional education in these and related matters in Connecticut.

PAR. 22. COMMITTEE ON PERINATAL MORBIDITY AND MORTALITY. The Council annually shall nominate to the House of Delegates a Committee on Perinatal Morbidity and Mortality to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of perinatal morbidity and mortality in Connecticut, to aid and encourage the establishment of high professional standards among those concerned with perinatal care and treatment, to organize and promote professional education in these and related matters in Connecticut, to encourage every hospital in Connecticut where maternity and newborn service is a functioning part of the staff activities to have an active committee on perinatal morbidity and mortality and to encourage component associations in the development of committees which can help in a consultative manner to correlate the study of perinatal morbidity and mortality in the hospitals in their areas.

PAR. 23. COMMITTEE ON STATE BLOOD BANK. The Council annually shall nominate to the House of Delegates a Committee on State Blood Bank to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to promote the development and maintenance of a statewide blood bank system operating in the interests of the public and the medical profession, to cooperate with the State Department of Health and with other agencies in encouraging the establishment and maintenance of high professional standards in the operation of blood banks and to organize and promote professional education in Connecticut regarding the blood program and related matters.

PAR. 24. COMMITTEE ON ACCIDENT PREVENTION. The Council annually shall nominate to the House of Delegates a Committee on Accident Prevention to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of accidents in Connecticut, to develop and implement standards for medical qualifications of vehicle operators, to encourage members of The Society to serve as consultants to various safety committees and groups, to encourage and assist the component associations in the development of liaison with community safety committees and councils, to cooperate with national and regional groups whose functions may include some phase of medical aspects of accident prevention and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, proposed statutory acts or amendments which it deems advisable.

PAR. 25. COMMITTEE ON MENTAL HEALTH. The Council annually shall nominate to the House of Delegates two members to serve on a Committee on Mental Health and shall nominate the chairman thereof. The committee shall consist of not more than eight members, each of whom shall serve for four years, and shall be nominated in such a manner that the terms of two members shall expire annually. The function of the committee shall be continually to study the provisions for the care of the mentally ill in Connecticut and those addicted to the use of habit-forming drugs and alcohol for the purpose of making information on these subjects available to members of The Society, to confer from time to time with the Connecticut Department of Mental Health and other mental health agencies, to organize and promote psychiatric specialties and, when indicated, to recommend to the Council for transmittal to the Committee on State Legislation for its consideration, proposed statutory acts or amendments which it deems advisable.

PAR. 26. COMMITTEE ON OCCUPATIONAL HEALTH. The Council annually shall nominate to the House of Delegates a Committee on Occupational Health to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to exercise leadership in developing and improving occupational health services to all employees including those in small establishments, to bring to the attention of employers and employees the values of occupational health services, to attract and guide physicians in private practice in rendering part-time or consultant occupational health services, to assist the component associations in the development of occupational health programs and in helping employers locate physicians willing and qualified to direct and serve occupational health programs, to aid and encourage the establishment and maintenance of high professional standards among all practitioners concerned with any phase of occupational health, to organize and promote professional education in occupational medicine in Connecticut and to review and advise the Committee on State Legislation and the Committee on National Legislation concerning proposed legislation pertaining to occupational health.

Par. 27. Committee on Public Health. The Council annually shall nominate to the House of Delegates a Committee on Public Health to consist of one member from each component association and such additional members as it may deem advisable and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies in Connecticut concerned with public health, sanitation and the prevention of communicable diseases, to serve as liaison between The Society and the Connecticut State Department of Health and other official public health agencies, to aid and encourage the establishment of high professional standards in public health practice, to disseminate to all physicians information useful in the prevention of disease, to organize and promote professional education on preventive medicine in Connecticut and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, regulatory or statutory changes which it deems desirable to protect and promote the public health within the state.

Par. 28. Committee on Rehabilitation. The Council annually shall nominate to the House of Delegates a Committee on Rehabilitation to consist of not less than seven members and shall nominate the chairman thereof. The committee shall include at least one member from each of the following committees: Committee on Hospitals, Committee on State Legislation, Committee on Aging, Committee on Mental Health, Committee on Occupational Health and Committee on Public Health. The function of the committee shall be to assist in the coordination of medical, psychological, social, educational and vocational resources of the state in the development of effective rehabilitation programs, to acquaint members of The Society with the magnitude of the rehabilitation problem from the standpoint of the patients' needs and the opportunities available to physicians to help in the rehabilitation of their patients, to study and disseminate information on techniques useful in the organization of medical and other phases of rehabilitation at the community level, to organize and promote professional education regarding rehabilitation techniques, to cooperate with other counties of The Society and the American Medical Association whose functions may include some phase of rehabilitation and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, legislative enactments designed to promote improvements in the rehabilitation effort.

Par. 29. Committee on Rural Health. The Council annually shall nominate to the House of Delegates a Committee on Rural Health to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies in Connecticut whose functions may include some activities applicable to the problems of rural health, to interest and encourage physicians in rural medical practice, to organize and promote health education programs and self-help programs, to confer with state and local public health agencies regarding services for rural areas, to gather and disseminate information concerning the prevention of rural occupational health disorders, to provide communities with how-to-do-it information which will assist in coordinating the activities of rural organizations and physicians and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, legislative enactments designed to promote improvements in rural health within the state.

ARTICLE XII — DUES

Section 1. Prescription

Annual dues for Active Members shall be prescribed for the ensuing calendar year in an amount recommended by the Council and approved by the House of Delegates and shall be an equal per capita assessment upon each Active Member except that physicians who become Active Members during the latter half of a fiscal year will be assessed one-half of the annual dues for that fiscal year.

Section 2. Publications

Membership dues shall include subscriptions to "Connecticut Medicine" and such other publications of The Society as are intended for distribution to all Active Members.

Section 3. Exemptions

The dues of any member may be remitted by vote of the Council on recommendation of a Councilor or Associate Councilor elected by the respective component association provided there has been prior remission of dues by that association. Honorary Members, Life Members, Associate Members and Student Members shall not be subject to assessment of dues but may be charged for subscriptions to publications, registration fees at scientific sessions, and the like.

Section 4. Delinquency

An Active Member is delinquent if his dues are not paid by August first of the year for which dues are prescribed and shall forfeit his active membership in The Society if he fails to pay the delinquent dues within thirty days after notice of his delinquency has been mailed to his last known address by the General Manager of The Society. Active Members of The Society who have been dropped from the active membership roll for nonpayment of dues cannot be reinstated until such indebtedness has been discharged, but such indebtedness shall apply only to the one fiscal year of delinquency.

ARTICLE XIII — FUNDS AND EXPENSES

Section 1. Fiscal Year

The fiscal year of The Society shall commence on January first and terminate on December thirty-first of each year.

Section 2. Deposit Of Funds

All funds of The Society shall be deposited promptly upon receipt in a state or national bank.

Section 3. Budget

The annual budget of The Society shall be prepared by the Council and shall be presented by the Secretary-Treasurer to the House of Delegates for approval. The per capita assessment of dues and any other assessments for the ensuing fiscal year shall be recommended by the Council and shall be transmitted by the Secretary-Treasurer to the House of Delegates for approval. No request or resolution appropriating funds of The Society shall be considered by the House of Delegates unless the Council has made prior review of such request or resolution and has transmitted recommendation thereon to the House of Delegates.

Section 4. Fidelity Bonds

All officers of The Society and other persons responsible for the receipt, custody and disbursement of Society funds shall be bonded at the expense of The Society by such fidelity bonds as the Council shall prescribe.

ARTICLE XIV — COMPONENT ASSOCIATIONS

Section 1. Definition

The County Medical Associations in Fairfield, Hartford, Litchfield, Middlesex, New Haven, New London, Tolland, and Windham Counties now in operation and in affiliation with The Connecticut State Medical Society shall be the component county associations, of The Society.

Section 2. Function

The function of the component medical associations shall be to bring together into one organization the physicians of each county and these associations shall be united for the purpose of organizing the medical profession in the State of Connecticut as provided in Article II of these Bylaws.

Section 3. Eligibility For Membership

Requirements for eligibility for membership in a component association shall be those determined by that association provided such requirements do not conflict with the Charter or Bylaws of The Society or with the Constitution or Bylaws of the American Medical Association.

Section 4. Transfer Of Component Association Membership

A member of a component association of The Society who removes his residence to another county within this state and who wishes to transfer his membership to the component association in the county of his new residence may do so upon the presentation of a certificate signed by the Secretary of the component association of which he is a member. This certificate shall state that he is a member in good standing in the component association in the county where he previously resided and that his financial obligations to that association for the current year have been paid. The certificate shall be accompanied by a regular application for membership. The component association in the county of his new residence shall add him to the rolls of that association without formality and without charging any dues for the remainder of the year of his transfer.

Section 5. Transfer From Another State Society

A member of a state medical society in another state, that is a component of the American Medical Association, wishing to transfer his membership to a component association of The Society shall present to the Secretary of the component association of The Society in which he is seeking membership a certificate from the Secretary of the county or state medical society of his previous residence. This certificate shall state that he is a member in good standing in that county or state medical association. This certificate and a properly completed application for membership shall be forwarded to the Board of Censors or Credentials Committee of the component association in this state in which he is seeking membership and that Board of Censors or Committee on Credentials may recommend his election at the next meeting of the component association subject to membership eligibility rules of that component association.

Section 6. Membership Roster

The Secretary of each component association shall keep an individual record of the members of that association, and this record shall include the full name, address, college degrees with year, medical schools attended with school and year of graduation, hospital affiliations, type of special practice, if any, and the date of registration in this state. Notations shall also be made concerning transfer and termination of membership.

Section 7. Discipline

Any member of a component association who is aggrieved by disciplinary action of the component association of which he is a member shall have the privilege of appealing to the Council of The Society which shall review the charges made against the disciplined member and the findings therein and render a decision concerning the disciplinary action taken; this shall be final.

Section 8. Termination Of Membership

When membership in a component association terminates for any cause, membership in the Connecticut State Medical Society shall be terminated automatically as of the same date.

Section 9. Dues

Any component association may at its option collect the annual dues assessed by The Society in conformity with regulations established by the Secretary-Treasurer of The Society. Bills for these dues shall be rendered to all members immediately following January 1 of each year and the component association shall forward all monies so collected on behalf of The Society to the Secretary-Treasurer of The Society quarterly and at such other times as the Secretary-Treasurer may direct and they shall accompany all payments with a report on a form to be provided by the Secretary-Treasurer. If a component association does not elect to collect the annual dues assessed by The Society as provided above, the Secretary-Treasurer of The Society shall collect the annual dues assessed by The Society from the members of that component association and collect also the dues assessed by that county association. In that event, the Secretary-Treasurer of The Society shall remit to the component association periodically all monies collected on behalf of that association and shall file an accounting of all component association assessments so collected for the year just closed with the component association before the 15th of January of each year.

Section 10. Bylaws

The component associations shall have the power to adopt only such bylaws as are not in conflict with the Bylaws of The Connecticut State Medical Society. In the event of an existing or apparent conflict, the Bylaws of The Society shall take precedence over those of a component association.

ARTICLE XV — AMENDMENTS TO BYLAWS

Section 1. Action

The Bylaws of The Society may be amended by a majority vote of the total number of the voting members of the House of Delegates.

Section 2. Procedure

Proposed amendments to the Bylaws shall be submitted to a meeting of the House of Delegates and shall immediately be placed upon the table without discussion. Such amendments shall lie upon the table until the next regular meeting of the House of Delegates and shall be published in CONNECTICUT MEDICINE on one or more occasions prior to that next meeting and shall be published in the call to that meeting, at which meeting the amendments shall be taken off the table and acted upon by the House of Delegates.

ARTICLE XVI — PARLIAMENTARY PROCEDURE

Section 1. Rules Of Order

In all matters of parliamentary procedure, The Society shall be governed by the most recent edition of Sturgis Standard Code of Parliamentary Procedure.

Section 2. Enablement Clause

The adoption of these Bylaws rescinds and revokes all previous Bylaws of The Society and supersedes their operation.

Delegates To Annual Meeting

The Bylaws of the Society provide that each county association is entitled to one delegate in the House of Delegates for each 35 members in the association or fraction thereof based on the membership as of December 31st of each year. According to this, the quota of delegates from each county association who should attend the Annual Meeting of the House of Delegates which will be held in Hamden, April 25th and the Semi-Annual Meeting in December is as follows:

COUNTY	MEMBERSHIP DEC. 31, 1960	OFFICIAL DELEGATES
Fairfield	877	26
Hartford	1,011	29
Litchfield	129	4
Middlesex	124	4
New Haven	909	26
New London	175	5
Tolland	24	1
Windham	66	2

Election Of Councilors And Alternate Councilors

Councilors and Alternate Councilors should be elected for a term of two years at the annual meeting of the county associations this year in Hartford, Middlesex, New London and Windham counties. No Councilor or Alternate Councilor elected by a county association shall serve more than three successive terms of two years each in his respective office, but after a lapse of one term of two years, such Councilor or Alternate Councilor may be eligible for re-election.

Appointment To Committee On Professional Relations

The Bylaws require that the county associations in Hartford, Middlesex, New London and Windham counties at their annual meeting in 1961 elect a past-president of the association to serve for two years on the state Committee on Professional Relations. No member of the Council of the State Medical Society is eligible for election to this committee and no member shall be elected to serve two consecutive terms. This appointment must be a past president of your association.

COUNCIL MEETING

Wednesday, February 8, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman at 2:30 P.M. on Wednesday, February 8, 1961. Present in addition to the Chairman were Drs. Gallivan, Feeney, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Buckley, Rentsch, Murray, Jr., Schiavetti, Gorman, Ogden, Gevalt, Grant, Davis, Chartier. Also present: Mr. A. N. Jorgenson, Mrs. Josephine P. Lindquist, Dr. William R. Richards. Absent were: Drs. Goldberg, Katzin, Phillips, and Purnell.

The printed minutes of the meeting of January 4, 1961, were approved.

The Chairman introduced Dr. A. N. Jorgenson, President of the University of Connecticut, who reviewed the course of events, past and present, which has led up to this year's legislative activity with regard to the establishment of a new medical-dental school in the state. Dr. Jorgenson feels that past studies have proved the need for such a school and believes that the time has come to investigate the pertinent details of location, size, curriculum, administration, etc. He indicated that non-governmental funds were available to the University of Connecticut to carry out these investigations, and asked only that the Society continue to give its support to the establishment of the medical-dental facility and that its willingness to advise and assist in the planning and operational phases of the undertaking be sustained. Informally, Dr. Jorgenson was assured of the Society's cooperation in these matters.

COMMITTEE ON MEDICARE PLAN-FEDERAL HEALTH BENEFITS PLAN. It was VOTED to accept, with regret, the resignation of Harold M. Clarke, New Britain, as chairman and a member of the Committee on Medicare-Federal Employees Health Benefits Plan. It was further VOTED to appoint Henry A. Archambault, Norwich, to complete Dr. Clarke's unexpired term as chairman of this committee.

COMMITTEE ON NATIONAL LEGISLATION. It was VOTED to appoint William E. Gatlin, Middletown to replace Vincent J. Vinci, resigned.

EXEMPTION FROM DUES. It was VOTED to exempt from payment of 1960 and 1961 dues, Edith A. MacLeod, New London County.

QUESTIONNAIRE PROPOSED BY CONNECTICUT MEDICINE. It was VOTED to authorize the Managing Editor of CONNECTICUT MEDICINE to utilize a "tear-out" page in one issue of the Journal for the purpose of determining the interest of the Society's members in committee assignments and to request the Managing Editor to report on the results of this experiment to the Council.

THE NATIONAL FOUNDATION. It was VOTED to recommend to the National Foundation the names of three members as nominees for appointment to the state scholarship selection committee of the Foundation. It is understood that only one member will be elected by the Foundation's Board. It was further VOTED to recommend the following candidates: Clarence D. Davis, New Haven, Ellwood C. Weise, Sr., Bridgeport John C. Leonard, Hartford.

MOTION RE ATTENDANCE OF ALTERNATE AMA DELEGATES AT AMA MEETINGS. Following certain amendments, it was VOTED to adopt a motion, presented by Max Caplan, Meriden, as follows:

IT IS MOVED: That the Council authorize the Society's three Alternate AMA Delegates to attend each meeting of the House of Delegates of the American Medical Association, and that the Society underwrite the usual expenses incurred by the three Alternate AMA Delegates in such attendance.

REPORT OF THE SUBCOMMITTEE TO STUDY AND REVISE THE BYLAWS. The Council received the report of its Subcommittee to Study and Revise the Bylaws. Following full discussion, it was VOTED to adopt a long series of amendments to the report and then further VOTED to adopt the report as amended. The report is published in this issue of CONNECTICUT MEDICINE (The Journal) as required by present Bylaws, and will be submitted to the House of Delegates at the annual meeting on April 25, 1961. Although it was not voted upon, there was considerable expression of the opinion that, if adopted on April 25, 1961, the new Bylaws should not become effective until April, 1962, thereby giving ample time for further study and possible amendment before finally superceding the present Bylaws.

REQUEST FOR APPOINTMENT OF A PHYSICIAN-HOSPITAL MEDIATION PANEL. The President informed the Council that he had received a request to appoint a panel of three members of the Society to assist in mediating a dispute which exists between a member of the Society and an accredited hospital over the revoking of the physician's privileges. It was VOTED to direct the President to explore the situation informally, prior to appointing a panel for the stated purpose.

LETTER OF REPRIMAND BY A CONSTITUENT COUNTY ASSOCIATION. It was VOTED *not* to publish a letter of reprimand in CONNECTICUT MEDICINE, which letter of reprimand had been addressed by the governing board of a constituent county medical association to one of its members.

CONNECTICUT MEDICAL SERVICE, INC. The Council was made aware of certain correspondence between the Chairman and an official of Connecticut Medical Service, Inc. relative to nomination of CMS directors and other matters. These materials were received as information. It was reported by the General Manager that the proposed Community Contract has been acted upon favorably by most of the constituent associations but that several have not yet reported. It was also reported that the Committee on Third Party Payments has met and that an opinion statement of the Committee is in preparation.

The Chairman announced that a joint meeting of the CSMS and CMS Liaison Committees is to be held on February 16th, at which time certain matters relating to the CMS Medical Advisory Committee will be acted upon. It was VOTED to approve nominations as follows:

For Chairman of the MAC—Allan J. Ryan, Meriden

For Vice-chairman of the MAC—Francis P. Gallo, Winsted

For Director—members of MAC—Cleveland R. Denton, Hartford and Francis P. Gallo, Winsted

For MAC member in Ophthalmology—Louis D. Harris, Hartford

PROGRESS REPORT ON RADIOLOGY SECTION-WORKMEN'S COMPENSATION AGREEMENTS. The following correspondence from Commissioner Leo J. Noonan, dated January 26, 1961, was received as information:

"At the Commission meeting held on January 17, 1961, the Commission decided to take no further action on the question as to what fees should be paid for X-rays taken by doctors other than specialists in roentgenology."

NATIONAL MEDICAL POLITICAL ACTION COMMITTEE. Consideration of a request from the AMA for an opinion on plans for creating a National Medical Political Action Committee was deferred until the next meeting.

RECOMMENDATIONS FROM COMMITTEE ON PUBLIC HEALTH. a. It was VOTED to approve a brochure on staphylococcal infections, prepared under the direction of the Committee on Public Health, and to permit the State Department of Health to reproduce and distribute this brochure.

b. The question of whether new drugs for sale should be given approval by the State Commissioner of Health or some medical agency or by both the State Commissioner of Health and the Commissioner of Consumer Protection, submitted by the Committee on Public Health, was received as information.

ELECTION OF STUDENT MEMBER. It was VOTED to elect to Student Membership Paul F. Dodd, 475 Hopmeadow Street, Simsbury, Yale School of Medicine—Class of 1964. Pre-Med: Fordham University, Parent: C. Raymond Dodd.

RESOLUTION RE INSURANCE FOR ELDER CITIZENS. It was VOTED to adopt the following Resolution; and to prepare a news release on the subject:

BE IT RESOLVED: That the Council of the Connecticut State Medical Society, recognizing the great public interest in the opportunities for our elder citizens to protect themselves with insurance against the major financial burdens and expense that attend serious illnesses, is pleased that associated Connecticut health insurance companies are proposing to make "major medical insurance" generally available to residents of Connecticut 65 years of age and over through joint action, and that these companies are assured of the continuing interest of the Society in the success of this significant step toward expanding the health insurance protection available to our citizens.

1961-62 NOMINATIONS. It was VOTED to transmit certain recommendations to the Nominating Committee, as provided for in the Bylaws, Article IX, Section 3, paragraph 3.

TELEVISION PROGRAMS. Consideration was given to a request from AMA that television time be purchased in which to make a reply or statement to certain programs scheduled for presentation nationally. The General Manager reported that inquiry had shown a twenty second "spot" could be obtained for about $400.00 and a fifteen minute period, if available, for $3,500-5,000. Since there are no funds available for this purpose, it was VOTED not to seek television facilities for this purpose at this time.

The General Manager reported, with regret, the death of Thomas H. Semley, who has been the custodian of the Society's building. His long and faithful service to the Society was noted, and it was VOTED to send his widow one month's salary.

DATE OF NEXT MEETING. It was VOTED that the Chairman and the General Manager set the date of the next meeting.

1961 MEETINGS

March 23—Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

April 5—Medical-Dental Orientation Course For the Chronically Ill and Aging, Veterans Administration Hospital, West Haven.

April 12—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

April 19—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

April 20—Annual Medical Symposium for Stamford-Darien-New Canaan Heart Association, Inc., at St. Joseph's Hospital, Stamford.

April 25, 26, 27—Annual Meeting, Connecticut State Medical Society, Hamden High School, Hamden.

April 26—Medical-Dental Orientation Course For the Chronically Ill and Aging, Forrest Hills Guest Home, 462 Derby Ave., New Haven.

May 3—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

May 10—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

June 26-30—Annual Meeting, American Medical Association, New York City.

October 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30—Clinical Meeting, American Medical Association, Denver.

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COVERS: Accidents occurring immediately after policy date. Covers ordinary sickness contracted after 30 days from policy date; hernia, heart trouble, diseases of the female generative organs contracted after 90 days from policy date. There are absolutely no exclusions other than pregnancy, childbirth or complications, noncommercial air travel, war, military service. Policy form #2PG.

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Clinical Medicine

THERAPEUTIC THROMBOLYSIS

Louis H. Nahum, m.d.
New Haven

Thromboembolic disorders are the principle causes of serious morbidity and mortality in this country. How can this toll be reduced. Only if it were possible to prevent thrombus formation or to dissolve the clot early in its evolution. Prevention of clot formation is now actively studied through diet, anti-coagulation and exercise. The dissolution of clots is also being actively studied now that the mechanisms of thrombolysis has become known.[1,2] Our goal of course should be complete clinical and anatomic restitution of thromboembolic disease and no effort in this direction can be neglected now that we have learned so much about the fibrinolytic system.

Enzymatic Thrombolysis

In a recent symposium on fibrinolysis[3] a thorough analysis of the use of plasmin and streptokinase the activator of plasminogen has been presented. Questions such as in which conditions are fibrinolytic therapy likely to be effective and whether the pathologic process can be reversed were dealt with. How to select patients for treatment, how to decide whether thrombolytic therapy was responsible for the improvement when it occurred, how to determine dose requirements, how long to treat a patient and whether the time is now at hand to recommend fibrinolytic therapy for general use or is it still to remain a subject of research in our major investigative centers, were all considered.

There was general agreement that even as an investigative tool plasmin should not be used in severe arteriosclerotic disease in which a thrombus is the final episode. Nor is it desirable to employ it in coronary occlusion in which the thrombus is superimposed on atherosclerosis nor in cerebral infarction in which hemorrhage can occur, nor in embolism in which the clot is almost always of some age before it breaks off and lodges in its embolic site.

On the other hand elderly patients that are debilitated and develop thrombophlebitis, postoperative patients which have developed compromised circulation in an extremity or in whom hazard of pulmonary embolism is high, central vein thrombosis or retinal artery thrombosis in which the hazard of blindness is great, could be subjects for investigating the value of a fibrinolytic agent. Dangers of the use of the material have already been published in a former communication in this Journal[2] and emphasized in this symposium such as bleeding into an infarcted area because of blood incoagulability, pyrogenic reactions, loss of circulating fibrinogen and probably coronary constriction. Furthermore how long to administer the agent and in what doses have also not yet been clarified.

One contributor after another pointed out the pitfalls in establishing that thrombolysis had been achieved. It was pointed out how dangerous it would be to assume in any one case that a good clinical result is actually due to thrombolysis. Discrepancies between external objective evidence of improvement and venographic evidence of the presence of a clot were always intruding themselves. Even the diagnosis of the presence of a clot was often equivocal for when there was good external evidence for the presence of clot there were times when there was no clot in the vein. Rupture of a muscular vein in a leg can cause swelling, pain and heat exactly like thrombophlebitis can. Even phlebographic evidence can be capricious for the radiopaque material can itself cause spasm of a vessel and simulate obstruction, or in the venous system alternate pathways are so common that often the dye may take an alternate course and the clot may be missed. Then there was always the question of spontaneous lysis to obscure the lytic effect supposed to have occurred from the injected plasmin.

Non-Enzymatic Thrombolysis

Normal human blood exhibits both fibrinolytic and thrombolytic activity as demonstrated easily by many techniques.

There is evidence from in vivo studies especially by phlebography that rapid dissolution of fresh clots can occur with restitution of a freshly occluded vessel. At autopsy one can find histologic evidence of thrombolytic activity in the existence of enzymatic disintegration of clots at the surface and in the majority, disintegration from within. Also if artificial clots in animals are made 12.5 per cent of them will show tendency towards spontaneous dissolution.

However, it is widely known in the clinic that thrombolytic activity normally present is insufficient to remove the entire clot before organization begins. Nevertheless it is true that fibrinolytic activity of human blood does increase during the course of thromboembolism and this increase corresponds with clinical improvement. On the other hand in chronic relapsing thrombosis there is a low fibrinolytic activity. Thus Zender[4] observed an increase in fibrinolytic titre of the circulating blood during the resorption of a large hematoma. It appears the organism tends to increase thrombolytic activity whenever intravascular and extravascular clots need to be removed.

Under certain conditions the organism can greatly increase the fibrinolytic activity spontaneously very rapidly in the circulating blood. If this is so, it would seem logical to help it along by a "do-it-yourself" method whenever dissolution of intravascular fibrin deposits is required. In other words how can one induce the human organism to undertake a controlled activation of its own endogenous fibrinolytic system.

All agree that spontaneous increase in fibrinolytic activity in the blood is due to an activator of plasminogen which is intimately incorporated in every fibrin clot.[1] The measurement of the activator in the blood accurately is most difficult, but it can be measured in the urine and its excretion rate (urokinase) reflects shifts in the fibrinolytic equilibrium of the blood. Thus there is an increase of urokinase in the urine of women at the time of resolution of deep vein thromboses post-partum, as well as in patients with onset of myocardial infarction, in patients with extended subcutaneous hemorrhages, and during open heart surgery.

Where does this activator come from? There is reason to believe it arises in the wall of veins and also arteries as a result of various stimuli; after electroshock, after obstructing the venous circulation, after injecting two units of pitressin. Other drugs are known to produce rapid fibrinolysis in man like adrenalin, acetyl-choline, nicotinic acid, and alcohol of nicotinic acid, but not nicotinamide. They all induce fibrinolysis within a few minutes after I.V. injection. However, after a pyrogen injection the effect may be delayed by as long as 100 minutes. In general the autonomic hormones work quickly and their effects subside quickly. This is as true whether the autonomic system is brought into activity through cerebral stimuli as through their peripheral neurohormones. In general, however, these substances act quickly and the activity subsides quickly. They are short term stimulators.

There are also long term non-enzymatic drugs which produce noticeable acceleration of the human fibrinolytic system lasting several hours to several days. At present these substances do not exhibit very marked activation of the fibrinolytic system. 100 m.l. of one per cent procaine solution injected intramuscularly increased fibrinolytic activity beginning in one hour and lasting up to eight hours but this is a huge dose. It has been known for a long time that in the therapy of thromboses the use of a local anesthetic or blockage of the sympathetic ganglia with procaine might bring about clinical improvement. Could this result have been due to the procaine? Paramino benzoic acid can induce increased fibrinolytic activity for 17 hours in many instances. It will of course be recognized that PABA is a part of the procaine molecule. Vitamin A in high doses of 30,000 units/km can enhance fibrinolytic potential in man with peak activity after 24 hours, but this dose is clearly excessive. Aside from substances that activate the fibrinolytic system, there must be other approaches to enhancement of thrombolysis. Urethane for example has been shown to increase digestion of a clot in man. Certainly other substances will be found.

Thrombolysis whether through enzymatic action or by increasing spontaneous fibrinolytic mechanisms is still in its infancy. The basic contribution by Tillet and Garner[5] over 27 years ago that extracts of streptococci can induce fibrin clot dissolution is beginning to pay off in practical ways not anticipated by these workers when the contribution was first made. It will not be long now when thrombolysis will be easy to accomplish, and this should usher in another great era in therapeutics whose goal is to cure disease and prolong human life.

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Microscope Used In New Approach To Surgery

A new approach for lifesaving surgery has been developed by a three-man heart research team at the University of Vermont that operates with the aid of a microscope. Applying their new technique, the investigators have been able to:

Operate on newborn infants on structures barely visible to the naked eye.

Reconstruct small arteries in the legs of two adults suffering from arteriosclerosis.

Perform operations never attempted before on some of the smaller arteries of experimental animals.

Perfect techniques that hold promise for pediatric surgery, for nerve reconstruction, for fertility problems that can be corrected with reconstruction of the Fallopian tubes and for all types of vascular surgery where correction has been successful in only relatively large vessels.

These pioneering achievements were reported at the American Heart Association's Scientific Sessions by Dr. Julius H. Jacobson II, who, with Drs. Donald B. Miller and Ernesto Suarez, developed the microscopic technique during research on the coronary arteries—the vessels that carry blood to the heart. Performing surgery under a dissecting microscope, they have developed an operating technique so precise that as many as 20 to 25 minute stitches may be taken to join blood vessels slightly thicker than a common toothpick.

The dissecting microscope used by the investigators is similar to those used by most college biology classes. It consists basically of a magnifying lens that can be fixed eight to 12 inches above the specimen being studied. In this instance, the lens is above the site of the operation. The lens magnifies the operating site a maximum of 40 times.

Using the dissecting microscope, the investigators have performed exploratory surgery on two newborn infants born with biliary atresia—a condition in which the body cannot dispose of bile secreted by the liver. They have reconstructed small arteries in the legs of two adults suffering severe pain from arteriosclerosis. The operation, which enabled the adult patients to walk comfortably, would not have been attempted with ordinary surgical methods.

In experimental animals, they have successfully performed operations on the coronary arteries supplying the heart. Surgeons, up to now, have limited most blood vessel surgery to arteries measuring four millimeters in diameter or larger. The Vermont team has successfully operated on arteries 1.4 mm (less than five one-hundredths of an inch) in diameter. In such operations, the surgical field can fit on the surface of an ordinary book match with room to spare.

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Around The State

New Haven County

Denis S. O'Connor, Managing Editor of Connecticut Medicine has been appointed as a member of the New Haven Board of Health by Mayor Richard C. Lee.

In making the announcement, Mayor Lee said, "New Haven is fortunate indeed to have Dr. O'Connor serve this important board. His extensive background in the medical field and his administrative abilities, will, I am certain, contribute a great deal to the further development of our public health programs. I am delighted that he is willing to serve his city." The appointment is for a five-year term.

Dr. O'Connor is on the staffs of Grace-New Haven Hospital, Meriden Hospital and Stamford Hospital and is attending orthopedic surgeon at St. Raphael's Hospital.

New London County

Jacob Wachtel, M.D., Director, Department of Anesthesia at the W. W. Backus Hospital in Norwich, is giving a paper on March 9th at the Southern Anesthesia Congress in Jackson, Mississippi entitled "Intravenous Amnalgesia For Heart Surgery."

Dr. Wachtel has been invited to speak at the International Symposium on Extracorporeal Circulation in Torino, Italy on June 7th and at the 5th World Assembly of the Israel Medical Association on August 16th at the Hebrew University in Jerusalem.

Non-Polioviruses Responsible For Only Moderate Paralysis

Non-poliovirus infections appear to cause a disease comparable to severe paralytic polio "only rarely or sporadically," a group of California researchers said today.

They based their opinion on a study of 358 patients originally diagnosed as having paralytic polio.

A report in the current Journal of the American Medical Association said:

"Laboratory evidence of poliovirus infection correlated directly with the degree of paralysis, being found in 85 per cent of patients with severe spinal paralytic disease but only 21 per cent of those with minimal weakness.

"Laboratory evidence of various non-poliovirus infections showed a converse correlation, being elicited in approximately one-third of the patients with minimal weakness, less than 10 per cent of those with moderate weakness, and not at all in severely paralyzed patients."

In view of previous studies incriminating non-polioviruses as causative agents of severe or extensive paralytic disease, the report said, "it is particularly noteworthy that such cases were not encountered in this study."

"It appears that the spectrum of clinical manifestations attributable to a number of non-polioviruses overlaps fairly often with that of poliovirus in the range of mild to moderate paretic [paralytic] illness but only rarely or sporadically extends into the range of severe paralytic poliomyelitis," the report continued.

"If this appraisal is valid, the relative importance of poliovirus and non-polioviruses as causative agents of mild clinical 'paralytic poliomyelitis' may be expected to vary from area to area, and year to year, depending on the particular types of viruses currently prevalent and the level of immunization against poliomyelitis."

A breakdown of the cases into categories of severity of paralysis showed a consistently greater frequency of non-poliovirus infections and a lesser frequency of confirmed poliovirus infections among those who had been inoculated with polio vaccine than was found among nonvaccinated patients, the report pointed out.

The findings indicate that widespread immunization with poliovirus vaccine has made the occurrence of paralytic illnesses due to non-polioviruses more apparent, it said, but no increase in actual incidence of such paralytic illnesses was established.

Doctor's Office

Marcel A. Azar, M.D., announces the opening of an office for the practice of general medicine at 111 West Street, Danbury.

Michael B. Buckley, M.D., announces the opening of an office for the practice of general medicine at 1100 Baldwin Street, Waterbury.

Saul M. Feldman, M.D., announces the opening of an office for the practice of general medicine at 2600 Main Street, Bridgeport.

John A. Gerda, M.D., announces the opening of an office for the practice of general medicine at the Newtown Shopping Center, Newtown.

Anthony E. Giangrasso, M.D., announces the opening of an office for the practice of general medicine at 5900 Main Street, Newtown.

Arnold Goldenberg, M.D., announces the opening of an office for the treatment of arthritis and rheumatic diseases at 56 Garden Street, Hartford.

Paul G. Kuehn, M.D., announces the opening of an office for the practice of surgery at 729 Ellington Road, South Windsor.

Frozen Foods Found Safe, Nutritious

Frozen foods handled according to good commercial practice are "safe, nutritious, and flavorful," a report in the current Journal of the American Medical Association.

However, the report said studies showed frozen precooked foods, such as poultry pies and prepared dinners, "offer ideal conditions" for contamination.

In a report to the A.M.A. Council on Foods and Nutrition, Horace K. Burr, Ph.D., and R. Paul Elliott, M.S., Western Regional Research Laboratory, U.S. Department of Agriculture, Albany, Calif., said:

"The inherent protective mechanisms found in frozen raw meats, fruits, and vegetables are not present in frozen precooked foods of a moist, bland, neutral nature, such as poultry pies and prepared dinners. Few incidents of food poisoning have been reported. . . .

"Theoretical possibilities of outbreaks, however, are inherent in these precooked foods. They often are contaminated with bacteria in the food plant after they are cooked and offer ideal conditions for bacterial growth.

"Thorough heating of a precooked food by the housewife always is advisable."

The authors pointed out that firms with mass production and laboratory control can maintain low bacterial levels. In the past 10 years, they said, competition has eliminated many smaller firms which used kitchen methods without laboratory controls.

Many bacteria are killed in the freezing process or in subsequent storage, they said.

Food poisoning organisms usually cannot grow at temperatures maintained in an ordinary household refrigerator, they added. Therefore, they said, any microbial growth in foods held at 40 degrees Fahrenheit or below will cause spoilage but will not endanger consumer health.

The studies also showed that frozen foods were "remarkably sensitive" to temperature increases.

"Whereas most chemical reactions are 20 to 35 per cent more rapid when the temperature rises 5 degrees Fahrenheit, certain deteriorative reactions in frozen foods may double, triple, or quadruple their rates with such a temperature rise," the report said.

As a means of improving the quality of frozen foods reaching the consumer, the researchers said the Association of Food and Drug Officials of the United States is developing a frozen food handling code. Meanwhile, they said nine industrial associations, representing processors, transportation companies, distributors, and retailers, are collaborating in the development of voluntary standards for industry practice.

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Book Reviews

YEAR BOOK OF MEDICINE, 1960-1961 Series. Edited by Paul Beeson, Carl Muschenheim, William B. Castle, Tinsley R. Harrison, Franz J. Ingelfinger, and Philip K. Bondy. The Year Book Publishers Inc., Chicago, Illinois, 1960, 708 pp. $8.00.

Reviewed by Louis H. Nahum

This is another in a series of yearly books devoted to progress in clinical medicine. It consists of abstracts of important contributions with cogent remarks at the end of some of them by the editors. These help to keep the contribution in perspective by authoritative comments.

The book consists of six parts each one edited by a different authority. Part I deals with progress in infectious disease, both in diagnosis and treatment. It also covers factors in susceptibility, the Schwartzman phenomenon and Collagen diseases. Part II deals with diagnosis and treatment of diseases of the chest, including emphysema, chronic bronchitis, neoplasms and familial disorders as well as infections. Part III deals with Blood and Blood Forming Organs. Part IV covers the heart blood vessels and the kidney. It covers congenital and acquired heart disease, hypertension, coronary disease, atherosclerosis of various organs and the kidney. Part V is concerned with advances in diagnosis and treatment of the digestive system and Part VI with metabolism. Here are reported papers on the adrenal cortex, electrolytes and water, the thyroid gland, the pancreas, the anterior pituatory, lipids, calcium, phosphorous and the Parathyroids and finally miscellaneous errors of metabolism.

Such a book is useful for the physician who cannot read the literature or who cannot critically evaluate what he reads. The editors are all outstanding authorities and their comments are themselves an education in critical evaluation. It is a most useful book and its popularity is attested by the success of the yearly editions.

SCIENCE IN PROGRESS, Eleventh Series. Edited by Hugh Taylor with 13 contributors. Yale University Press, New Haven, Conn., 1960, 379 pp.

Reviewed by Louis H. Nahum

This book deals with scientific developments in geophysics, astrophysics, biology and chemistry. Not all recent advances are in it, but enough to show at least two ways in which scientific developments affect our society. On the one hand they prepare the way for a more practical mastery of our environment through technological innovations in agriculture, industry, medicine and warfare. Inevitably these must produce radical changes in our social patterns of living. There is another way in which scientific developments affect men's lives, less publicized than the first but of revolutionary import. It is the challenge it poses to established beliefs about the world and its parts which must force changes in habitual modes of thought. This must lead to revision of ancient creeds and alteration in intellectual habits. It is from this point of view that this book must be approached. In it Sigma Xi and the Research Society of America have assembled a famous list of contributors to illustrate scientific progress in such diverse fields as the outer reaches of space, the earth, man, viruses and minute particles. The thoughts in this volume were aroused by the International Geophysical year. How has the earth given birth to its own oceans, atmosphere, islands, continents and mountains and is this process continuing? What about cosmic radiation falling on the earth from outer space and what do they mean in geophysics and astrophysics? The effect of these radiations on isotope distribution, with its production of carbon 14 hydrogen 3 have basic significance in numerous areas especially science and medicine.

Radioastronomy first announced in 1932 by Jansky is well recorded by his brother, C. M. Jansky, Jr. The development of the techniques of radioastronomy is detailed by Gerald S. Hawkins from the Harvard Observatory—techniques which are now extensively used in tracking man-made satellites. It is these techniques that permitted the dramatic recording of the impact of a Russian rocket on the moon.

Man on earth, his enemies, the viruses and their relation to cancer, his behavior patterns, his smoking habits and their consequences, the biological control of chemical factors in man's enviornment, are all treated by outstanding scholars in their field. The volume concludes with two chapters on inorganic chemistry. The first deals with fine particles, their method of preparation. The last chapter is concerned with surface properties of finely divided materials and the new techniques developed which have enormously promoted such research.

It is not necessary for the physician to divert his mind when weary of work, by reading detective stories, mystery murders and the lurid headlines in newspapers. This book will transport him into a magic world of exploration and discovery nonthe-less real because of its cosmic sweep. He will find himself in the fascinating forefront of scientific advance which he can tell to his children or friends with edification of his hearers and satisfaction of his own innate curiosity. In this world there is no national rivalry, no political shenanigans. It is a search for the truth of our world in which scientists from all countries have wholeheartedly co-operated for the benefit of all mankind.

A word should be said about the excellent paper and elegant printing which makes this book a printer's piece of art.

ADVANCES IN INTERNAL MEDICINE. Volume X by William Dock, M.D., and I. Snapper, M.D., Editors, The Year Book Publishers, Inc., Chicago, Illinois, 1960, 358 pp. $10.00.

Reviewed by Louis H. Nahum

This volume consists of ten review articles by celebrated authors from all over the world. Surgical treatment of Mitral Stenosis and Aortic Stenosis by Charles Baker, Guy's Hospital, London; Newer diagnostic techniques in Congenital Heart Disease by Eugene Braunwald and Andrew G. Morrow; Indications for and results of surgical treatment of Congenital Heart Disease by Maurice Campbell of London; Endocrinologic factors in the Pathogenesis of Peptic Ulcer by B. Eiseman and W. Silen; Disorders Related to Disturbed Absorption of the Small Bowel by Frank H. Gardner and Elliott W. Strauss; Clinical Phonocardiography; Graphic Analysis of Clinical Auscultation by A. Grishman, S. B. Bleifer and E. Donoso; Diagnosis and Management of the Curable Forms of Hypertension by D. Grob; Cushing's Syndrome; Experience with Total Adrenalectomy by M. Horwith and P. E. Stokes; The Control of Erythropoiesis by L. O. Jacobson, C. W. Gurney and E. Goldwassen; Bronchiole-Alveolar Carcinoma by A. A. Liebow.

Each section is authoritative, timely and well written. For those who wish reviews of these subjects brought together this will prove to be a good reference book. If a student wishes to go further in the subject matter there is an excellent bibliography after each chapter.

SURGICAL TREATMENT OF UNEQUAL EXTREMITIES by Charles W. Goff, M.D. Published by Charles C. Thomas, Springfield Illinois, 184 pp. $11.00.

Reviewed by Denis S. O'Connor

Any disease, traumatic, or congenital condition which disturbs the growth of bones can, and does, create serious problems for the orthopaedic surgeon. It is especially serious in the lower extremities because of its effects on posture as well as gait.

Within limits it can be accepted and compensated for by equalization through shoe changes, but with the growing individual, increasing discrepancy in the lower extremity length requires surgical action to correct this tendency. Various methods have been tried—lengthening of the short extremity; shortening of the normal extremity; and attempts to control growth. The use of the latter method has become the accepted one in recent years due to the introduction of the staple for limiting epiphyseal growth.

To control growth to the right degree to decrease the discrepancy involves the determination of probable normal growth and it is this phase of the problem to which Dr. Goff, as well as others, has given much study. The work of Dr. William Green at Boston Children's Hospital has been especially valuable.

The literature on the research into this problem and the clinical experience of orthopaedic surgeons throughout the world has been well covered, as well as the types of orthopaedic conditions which give rise to the problem of length disparity.

What Dr. Goff and others in this field are trying to do is to put on a scientific basis the approach to a problem which until recently was handled emperically.

This is an excellent monogram on a subject which is certain to be of increasing interest due to an awakened interest in physical perfection.

For the orthopaedic surgeon this is an excellent basic book on the subject of disparity and the excellent bibliography at the end will furnish him with the sources of further study.

The arrangement of material is excellent, the illustrations are clear and serve the text well.

The book is a welcome addition to the orthopaedic literature.

PROGRESS IN THE TREATMENT OF FRACTURES AND DISLOCATIONS 1950-1960 by Thomas B. Quigley, M.D., and Henry Banks, M.D. Published by W. B. Saunders Company, Philadelphia, Pa., 1960, 102 pp. $2.50.

Reviewed by Denis S. O'Connor

This is a status report on fractures and dislocations which was originally printed in the New England Journal of Medicine and is now available as a small, easily read volume. It treats briefly the many common fractures and dislocations with reference to the present concepts of treatment.

Not the least value of this volume is the more than four hundred references pertaining to the subject.

CURRENT MEDICAL REFERENCES by P. J. Sanazaro, M.D. Lange Medical Publications, Los Altos, California, 535 pp. $3.50.

Reviewed by Denis S. O'Connor

For the person interested in a particular medical problem this book gives him a few basically helpful references but in all cases, the articles referred to give many additional references which should enable the investigator to pursue his quest to whatever extent he wishes.

CONTROLLED CLINICAL TRIALS organized under the direction of Professor A. Bradford Hill F.R.S.; Charles C. Thomas, Springfield, Illinois, 1960, 171 pp. $9.50.

Reviewed by Irwin S. Eskwith

This book contains a series of papers by British authors which were presented at the Conference on Controlled Clinical trials. This gathering called by the Council for International Organizations of Medical Sciences, was held in Vienna, March, 1959. Presiding at this meeting was Professor Hill, the editor of this book. The volume consists of a series of short papers dealing with various aspects of clinical investigation. Dr. Hill, in the opening chapter, emphasizes the necessity for an experimental approach to the testing of new drugs and procedures, rather than a subjective one. In the same chapter, he has discussed the ethical problems involved. On the whole he is tolerant of testing new products unless marked and readily demonstrable toxicity is observed. His position on this matter, one feels, is that where human life is imperilled by a disease, certain risks may be necessary in finding a cure for that illness.

Chapters giving advice on the construction of comparable groups and criteria for assessment have been contributed by Armitage and Fletcher. The former author has also written a paper stressing the advantages of sequential trials. These consist of experiments in which patients come into the study as they become available. Data from each is analyzed immediately rather than when the experiment arrives at any set conclusion.

Armitage feels this method often permits speed and economy of patients not easily obtained when data is reviewed only at the end of a trial.

Certain interesting facts are revealed about individual diseases themselves, for actual studies have been used to illustrate various authors' ideas and methods. It is interesting that in clinical trials in both pulmonary tuberculosis and rheumatoid arthritis, the steroid treated groups in each study progressed more rapidly than those treated with antibiotics alone (tuberculosis) or older methods such as salicylates in the case of arthritis. However, this more rapid rate of relief lasted only three to four months and at the end of this period the non-cortisone groups had equalled the results of those patients that had received steroids. The final conclusion in arthritis was, as we have all known for some time, that aspirin is equally effective. This is only added confirmation to the powerful anti-phlogistic effect, but minimal curative effect of cortisone and its derivatives.

There are two articles dealing with anti-coagulants in myocardial infarction. It is interesting to read that early evaluation of these compounds was at first difficult. Many mild cases of coronary thrombosis that previously had been treated at home sought hospitalization once these drugs came into use. This made comparison with pre-anticoagulant therapy mortality difficult.

However, when groups were selected, those kept on long-term anticoagulant therapy had a lower mortality during the first two years following their attack than the control group.

There are several articles dealing with the evaluation of compounds used in some types of cancer. As might be expected, these sections are less clearcut and readable than the other papers. They do serve the purpose of illustrating the general ineffectiveness of compounds now available.

There is very little attention paid to the type of statistical evaluation so common in American journals. It would appear that the English are less impressed with this sort of analyses than their American colleagues. In fact, in the last chapter, Dr. Hill expresses a mild scepticism regarding an overly strong emphasis on mathematical evaluation.

The book is well written and readable. It possesses considerable value to anyone who has, is, or may be contemplating any type of clinical trial.

HEREDITABLE DISORDERS OF CONNECTIVE TISSUE. Victor A. McKusick. C. V. Mosby Co., St. Louis, 1960, 333 pp $12.00.

Reviewed by Louis H. Nahum

"Connective tissue connects the numerous branches of medical science. Without connective tissue medicine would come to pieces even non-viable pieces just like the cells of the human body."—Asboe-Hansen

The portrait of Sir Archibald E. Garrod faces the book. He was the successor to Osler at Oxford and introduced hereditary disorders into medicine by his classic studies on "Inborn errors of metabolism." It was he who believed that clinical investigation of hereditary disorders can shed light on normal developmental and biochemical mechanisms and the author rightly dedicates this book to Sir Garrod.

The first edition was a limited publication based on a series of articles which appeared in the Journal of Chronic Diseases. In the second edition 80 illustrations have been added to round out the clinical and pathologic descriptions, about 130 pages have been added and the literature has been surveyed. One objective of the book and the clinical investigation on which it is based is a synthesis of the scattered information about several conditions which have in common the fact that they are generalized disorders of connective tissue and are hereditable.

A second objective was to seek justification for the thesis first propounded by Harvey that clinical investigation of pathologic states is a way of studying biology. The hereditary syndromes are tools for studying the normal situation, in this case the elucidation of the role of normal connective tissue through studying its defective syntheses. We have defective hemoglobin molecules, probably defective cardiac muscle, now defective connective tissue. Further studies through tissue culture, analytic chemistry, the electron microscope should reveal the defective enzyme or gene responsible.

The book consists of a chapter on clinical behavior of hereditary syndromes. Another on Biology of normal connective tissue. Then chapters on Marfan's syndrome, The Ehlers-Danlos syndrome and osteogenesis imperfecta, Pseuthozanthoma Elasticum, The Hurler's Syndrome. The concluding chapter considers Fibrodysplasia Ossificans Progressiva, Osteopoikleosis, Leri's Pleontosis, Pagets disease of bone, other possible hereditary and generalized disorders of connective tissue, the future in the study of hereditary disorders of connective tissue, general comments, summary and conclusions. Each chapter is followed by an extensive bibliography. At the end is an index for quick reference. The book is beautifully printed and extensively illustrated and each plate is exquisitely chosen. Family trees are given in each disease and this should be of great help to medical geneticists.

It is the generalists, the internist and pediatrician to whom this book is addressed. It is he who can size up the total situation in the case of an individual patient and size it up with reference to the family background with which he is most likely to have first-hand familiarity. It is he who first sees excessive loose-jointedness, ganglingness, mild pectus excavatum, pigeon breast, kyphoscoliosis, flat feet. Internal medical manifestations may be an integral part of a generalized syndrome because generalized and hereditary disorders of connective tissue extend also to many divisions of medical science and practice. Nevertheless all medical specialists from time to time will need to refer to this book.

The ophthalmologist sees grave changes in pseudozanthoma elasticum, in Marfan's syndrome, less serious but important in osteogenesis imperfecta, the Ehlers-Danlos and the Hurler's Syndrome.

The otologist sees Hurler's, osteogenesis imperfecta, but rarely Marfan.

The orthopedist frequently sees fibrodysplasia ossificans progressiva. He is concerned with osteogenesis imperfecta, Ehlers-Danlos and Hurler's syndrome.

The general surgeon is constantly repairing hernias of the patient with Marfan's and Turler's, Ehlers-Danlos syndrome as well as osteogenesis imperfecta.

Ehlers-Danlos patients bruise easily and those with pseudozanthoma elasticum show tendencies to multiple hemorrhages. This brings them to the hematologist.

Among patients with gastro-intestinal hemorrhage the gastroenterologist will encounter at times a case of pseudozanthoma elasticum.

The cardiologist is finding Marfan's syndrome in cases of aortic regurgitation and dissecting aneurysm. Cardiac involvement in the Hurler's syndrome brings the patient to death at an early age. In peripheral vascular disease pseudo-zanthoma elasticum occasionally figures as a predominant etiologic factor.

The chest physician will occasionally see cystic disease of the lung in Marfan's syndrome. Rupture of the lung with pneumothorax or mediastinal emphysema is also found in Ehlers-Danlos syndrome.

And so on down the list of the dermatologist, the plastic surgeon, the dentist, the rheumatologist, the endocrinologist, the medical geneticist, the pathologist, the radiologist.

This is a book that no physician be he generalist or specialist can afford to be without. The medical student will turn to it avidly for information on an obscure syndrome. The pathologist and roentgenologist should possess it. In fact it is difficult for this reviewer to think of any specialist whose knowledge of medicine would not be enhanced by reading this book and whose practice would not be illuminated by recognizing the occasional case with a hereditary disorder of connective tissue.

Antibiotic Prophylaxis Of Chronic Bronchitis

Physicians in Great Britain, and to a lesser extent in the United States and other countries, have become acutely aware in recent years of the toll exacted by severe chronic bronchitis. Of the many causal factors in chronic bronchitis, viral and bacterial respiratory infections and atmospheric pollution are undoubtedly the most important. Since each acute exacerbation may increase the amount of permanent damage to the lungs, there is a compelling need for public and individual measures that will prevent, abort or shorten the duration of attacks.

Antibiotic prophylaxis against bacterial infection is the only practical measure that offers any promise with most patients. Antibiotics can be administered at the first sign of an acute exacerbation, or they can be given continuously throughout the year, or at least through the winter months. Long-term treatment of this sort rules out injections for most patients, and aerosol treatment with penicillin and streptomycin has proved relatively ineffective (K. Knox, et al., *Lancet, 1*:120, 1955). In most cases, therefore, the physician must rely on the use of oral drugs active against the organisms commonly encountered in chronic bronchitis.

Reprinted from The Medical Letter on Drugs and Therapeutics, New York, N. Y.

Yale Poliomyelitis Study Unit

The study of the Sabin oral poliovirus vaccine carried out on 350 pre-school children in New Haven, early in 1960, has been completed and was highly successful according to Dr. John R. Paul under whom the project was initiated.

It was found that in children who had received the Salk vaccine a considerable percentage failed to show antibodies in sufficient strength to give protection against all three poliovirus types. On the other hand, in children receiving the Sabin vaccine the range of response was high.

Both the City and the State Medical Societies approved the experiment in advance.

In Memoriam

Cheney, George P.—formerly of New London; Maryland Medical School, 1913; Dr. Cheney served as senior staff surgeon at Lawrence Memorial Hospital, New London, and as consulting surgeon at the Coast Guard Academy; he moved with his wife to Miami in 1952 and practiced there for three years; in failing health for the past two years, he died January 22 at the Mercy Hospital, Miami, aged 71 years.

Phelps, Paul S.—Hartford; McGill University School of Medicine, 1930; served for many years as a state deputy health commissioner in charge of the office of tuberculosis control, Connecticut State Department of Health; Dr. Phelps was credited with starting mass X-Ray screening programs for tuberculosis; he retired about three months ago; died at Hartford Hospital January 31, at age of 56 years.

New Mode Of Lead Poisoning Hits Scrap Metal Workers

Seven scrap metal workers suffered lead poisoning while using torches to cut heavily painted steel bridge girders, according to a report in the current Journal of the American Medical Association.

A very high concentration of lead was found in the fumes created by the work, Dr. Frederick E. Zimmer, Danville, Pa., said.

Paint chipped from the girders contained 21.6 per cent lead, he said. Samples of air taken where the men were working contained up to 20 times the maximum allowable concentration of lead, he said.

Several of the men became ill within one week of starting the work and all seven were poisoned within five weeks, Dr. Zimmer reported.

All showed classical symptoms of lead poisoning, including gagging, nausea, loss of appetite, muscular weakness, generalized aching, and fatigability, he said. However, only two required treatment and both recovered rapidly, he said.

"In this day of extensive construction and renovation and with reclamation of scrap steel a steadily increasing business it may be anticipated that this mode of rapidly developing lead poisoning will become more important," he said.

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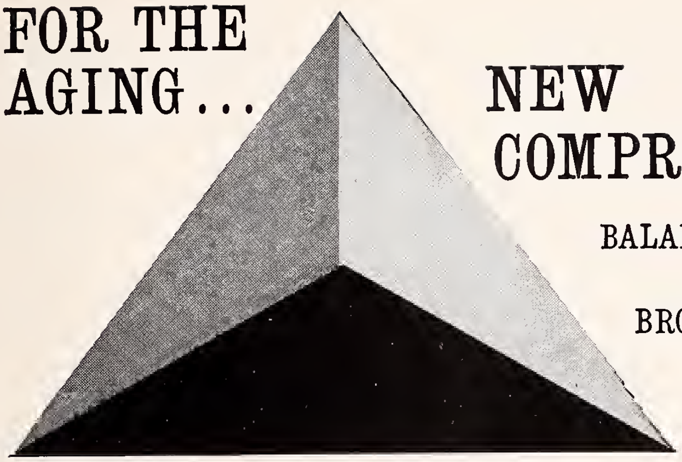

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Dr. Charles Flynn's Golden Anniversary

The annual dinner of the medical staff of the Hospital of St. Raphael's was held at the Union League Club on January 25. Dr. Charles Flynn of New Haven, observing his golden anniversary in medicine, was the guest of honor.

Dr. Flynn's response to the felicitations of the staff, containing as it does thoughts which are applicable beyond the confines of St. Raphael's Hospital family, is printed here as a special article:

It is given to few physicians to observe their golden jubilee. For this and a lifetime of excellent health I am grateful. The vantage point of years tempts me to lovingly unfold to all here this evening the history of St. Raphael's. I am dissuaded, however, since my contemporaries know it very well and the younger men among you may learn it for the asking or a trip to your hospital library.

Instead of a history I am impelled to sketch briefly the garden in which the seed of St. Raphael's was sown and the social, political, aesthetic, and spiritual nutrients which fostered its growth.

First, the social background of New Haven of 60 to 65 years ago. A large part of the heterogeneous population consisted of immigrants who had come here to find a better life in opportunity and freedom, in return for which they offered their God-given talents willingly and generously. Germany gave the skilled, patient, mathematical hands of the industrial arts. From Italy came the masters of stone work and a sizeable penetration of the fine arts. In a more humble field the Irish sought dignity in domestic, equine, and minor political jobs along with the hard out-of-doors labor. The Scandinavians were without peers in building and cabinet work while Poland contributed a bulwark of the daily personnel for the growing factories and from England came the men of the sea.

There were ambition, industry, thrift, honesty, and a right pride in these peoples and, in the souls of all, a common love of music and fun. Such was the devotion to music that an orchestra was seldom imported to support a theatrical performance. Openings were more frequent in those days and the musicians read manuscript (an accomplishment in itself) since the music was not printed unless the show was a success. This social amalgamation at the century's turn, produced the New Haven Symphony, third oldest in the nation. One of my most treasured memories is my three year association in the violin section. My fond recollection of the jocularity and endearing foibles of the musicians tempts me to digress—There was the time that the French horn player was two measures behind all through a Beethoven Symphony. I am certain that our beloved Eddie Wittstein, the sole survivor of that group, will bear me out that the horn player's lag was the direct result of the afternoon's foamy refreshment in the old Aschenbroedel prior to the concert. We all thought it was very funny. Mr. Horatio Parker, the conductor, thought otherwise.

Against this backdrop of struggling culture, eager industry, rightful ambition, and the secure standards of Yale University, evolved a political atmosphere that was healthy, direct, competitive, and uncomplicated. Men thought, worked, studied, expressed their views and voted accordingly. Life proceeded, direct and uncluttered. Living was pleasant. Even a less wary penny pincher than Jack Benny must have found satisfaction in the five-cent trolly fares and the sirloin sandwiches for 25 cents. It was the horse and buggy day for the physician and the kitchen operating room for the surgeon. No movies, radio, few phones, very few autos, no wonder drugs or medical crutches, no tensions, no psychiatrists. Such was the social and medical atmosphere when the Hospital of St. Raphael began.

It was the genial custom in those days for doctors to gather in small groups and talk shop. Whenever they met in the office of Dr. James Flynn, who was my uncle, I was usually sent for cigars or cigarettes, and sometimes for a pitcher of beer at the corner saloon. No cans or bottles then. Here, at these meetings, the idea of St. Raphael's was born. There were Drs. Luby, O'Connor, Verdi, McCabe, Sheehan, Leonard Bacon, Cohane, Whittemore, Maher, Butler and Riley and two or three others. These men felt that it was time to establish an open hospital where all doctors could treat their patients. None of the young doctors at that time had hospital privileges, not more than 20 in the entire city. I heard and listened to many of these discussions and it was Dr. Harry Riley who influenced the Sisters from Convent Stations in New Jersey to attempt the project of such a hospital. And so, 54 years ago it was begun, and I believe I am the oldest living soul who had the honor of being present at St. Raphael's inception. The last living member of the original staff is Dr. Eugene Blake, who, fortunately, is still alive and to some extent, in practice. It is due to the aforementioned doctors, their sacrifices and heartaches that you have today the fine institution for medical practice.

I have touched upon the social, political, and aesthetic climate that has always surrounded your hospital. The spiritual is a monument unto itself.

And now that you have your workshop with its ever increasing facilities and ever widening scope, may I address my remarks to the younger and youngest among you.

From the safe distance of three score and 10 years I have noticed forces at work which tend to downgrade our profession and which, if not watched and checked, could mark the end of freedom and perfection in medicine. That end could be reasonably *soon, ironic*—and *final.* I shall be specific and offer a few ways for preventing such a catastrophe.

First, the narrowness of the general education of today's doctor. Through preparatory, college, and medical school, the interest is on predominantly scientific courses. While this is useful and necessary in obtaining a medical degree it has other stifling and adverse results. It tends to cloister the mind, limit man's understanding of his fellowman as a human being, and deprive the young doctor of some of the greatest joys and satisfactions in life. What to do about this? Read. Read not only your medical journals but have your own world of belles—lettres as well. Has it not been wisely said that to know and understand the problems, emotional, social, as well as physical, is to be well on the way to a successful treatment for your patient. Neither would a bit of "Love thy neighbor" be amiss. Never was more excellent reading of the world's finest writers more available than it is today. Make room in your schedules for it.

Second. The tendency to incomplete and impulsive diagnosis. I believe that there is a trend toward too much dependence on the ancillary services. All of these are fine and a boon and a blessing to medicine, but it is my conviction that they should take second place in most cases. When a painstaking history, careful interrogation, full use of the five senses and skillful palpation leave an area of doubt; then resort to the scientific and mechanical. It is not fantastic, in this atomic age, to imagine a young doctor in military service somewhere to be stripped of all the trappings of modern medicine. There would be no laboratory or X-ray or electrocardiograph "on the beach." What can he do then? If he has not mastered the fundamental requirements for diagnosis, perhaps he can do no more than a well trained stretcher bearer. The latter at least would know how to make the fallen hero as comfortable as possible. As doctors, rely on yourselves as such—first.

Third. The fallacy of speed in recovery. Why expect miracles immediately? Why a virus on Friday, wonder drug on Friday night, a football game on Saturday, and the virus back again on Tuesday? Why not order the patient to more rest in order to give the body time to recover. After all it is the body you are concerned with in medicine; or is it? What is wrong with a few extra hours of rest? Everyone but doctors have sick leave anyway, so why not make haste slowly and avoid the "heresy of activity."

Fourth. It seems to me that the medical profession is rapidly losing control of its own way in life. Many young doctors are accepting salaried positions in industry and government. Thus employed, a large percentage do not join their fellows in the local, county or state societies. They have no common bond of understanding with the practicing physicians, and yet, as time goes by, they come into positions of power and regulatory capacities for all the doctors. They are free to move without law to uphold them and thus far the practicing physicians have acquiesed without offering any opposition. They make rules pertaining to everything from the size and qualifications of the house staff to routine of your daily life, living quarters, what you shall be taught, hours of work, etc. The more regulations, the more regimentation. Do you not see that in time this can destroy your freedom in medicine? Remember, however, that without you, they cannot function. You are indispensable to all of these groups and the government and most of all, your patients. Why not stand together and question the validity of some of these dissembling regulatory measures? Or do you wish to be reduced to a mere mathematical syllogism?

Fifth and last. Lack of interest in public affairs. For a long time doctors seem to have considered themselves a special breed, an isolated social group with their own world. We rely on others for most of our political notions. Are our expressed views our own or our favorite commentator's, who must, day in, day out, complete his copy for a deadline. Brilliant, you say. Knows his subject, knows his Washington. He's in a position to know. Yes, he is, to know something—but not all. Only God is good enough for that, while most of the time our scintillating analyst achieves nothing but a mountainous pile of redundance.

What to do? Join local groups and learn first hand what your community's needs are and who is the best man for the job. You do not have time to run for office, but you are in a position to help those who can, and in so doing, help yourself and your profession.

And now I have said all these things to you for two reasons, to urge you to cherish and guard our beloved Hospital of St. Raphael as its founding fathers did from its embryonic stage to its present grandeur, and to contrast the simple and orderly procedure of yesteryear with the complicated and dispiteous of today.

It seems to me, that if we make a humble substitution in the words of the Psalms, we can for the moment apply them to St. Raphael's, since your hospital is your house and your glory.

> O! Lord, I love the house in which You dwell, the tenting place of your glory.
>
> My foot stands on level ground; in the assemblies I will bless You.

Mark Your Calendar

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April 25, 26, 27, 1961
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169TH ANNUAL MEETING
Hamden High School, Hamden, April 25, 26, 27, 1961

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vitamin deficiencies
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against relapse
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pediatric drops
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PRECAUTIONS: As with many other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs discontinue medication. Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under observation.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York Lederle

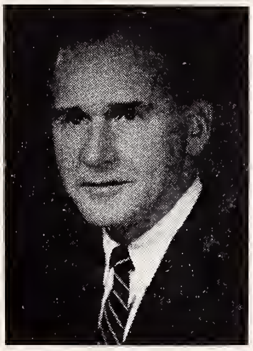
169th ANNUAL MEETING
of the
CONNECTICUT STATE MEDICAL SOCIETY

HAMDEN HIGH SCHOOL
2040 Dixwell Avenue, Hamden, Connecticut

April 25, 26, 27, 1961

PROGRAM COMMITTEE

J. FORBES ROGERS, *Stamford, Chairman*
HOWARD LEVINE, *New Britain*
HARVEY W. KAETZ, *New Haven*


J. FORBES ROGERS
Stamford

CHARLES C. VERSTANDIG
New Haven

LOCAL COMMITTEE ON ARRANGEMENTS

CHARLES C. VERSTANDIG, *New Haven, Chairman*

DAVID J. COHEN, *Meriden*
CHARLES M. D'ALESSIO, *Derby*
JOHN J. MENDILLO, *New Haven*
GIOACCHINO S. PARELLA, Milford
KURT S. PELZ, *Wallingford*
ANSON G. STOCKING, *Waterbury*

PROGRAM

Tuesday, April 25

AUDITORIUM

ANNUAL MEETING OF THE HOUSE OF DELEGATES

MICHAEL R. SCULLY, *Bridgeport, Speaker of the House, Presiding*

10:00 CALL TO ORDER
BUSINESS SESSION

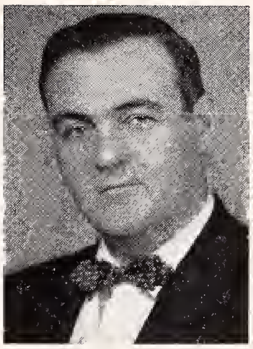
1:00 LUNCHEON FOR OFFICERS, MEMBERS OF THE HOUSE AND GUESTS

2:00 RESUMPTION OF BUSINESS

7:00 ANNUAL DINNER OF THE COUNCIL—The Council will hold its annual dinner for the Program Committee, the Local Committee on Arrangements, and guests at the Colonial House, Hamden

HAMDEN HIGH SCHOOL

William Dameshek
Boston


Geoffrey T. Mann
Richmond, Va.

Jay M. Arena
Durham, N. C.

Douglas Buchanan
Chicago

Paul Fremont-Smith
Boston

Wednesday, April 26

9:00 Registration—Exhibit Hall

Auditorium

10:00 Call to Order—Thomas M. Feeney, Hartford, President of the Society

Address of Welcome—Anthony J. Mendillo, *President, New Haven County Medical Association*

Harvey W. Kaetz, *New Haven, presiding*

10:30 Systemic Lupus and Its Meaning

William Dameshek, *Boston, Massachusetts; Professor of Medicine, Tufts University School of Medicine; Hematologist-in-Chief, Pratt Clinic, New England Center Hospital*

11:10 Intermission to Visit Technical Exhibits

11:40 The Practicing Doctors Place in Modern Crime Detection

Geoffrey T. Mann, *Richmond, Virginia; Professor and Chairman, Department of Legal Medicine; Professor and Chairman, Division of Forensic Pathology, Medical College of Virginia; Pathologist, St. Elizabeth's Hospital and John Randolph Hospital*

12:20 The Symptoms and Treatment of Common Poisons

Jay M. Arena, *Durham, North Carolina; Professor of Pediatrics, Duke University Medical Center; Director, Duke Poison Control Center*

1:00 Luncheon—Cafeteria of the High School

Intermission to Visit Technical Exhibits

Howard Levine, *New Britain, presiding*

2:00 Spasticity in Childhood

Douglas Buchanan, *Chicago, Illinois; Professor of Pediatric Neurology, University of Chicago; University of Chicago Clinics*

2:40 Current Concepts of Antibiotic Therapy

Paul Fremont-Smith, *Boston; Clinical Associate in Medicine, Harvard Medical School; Senior Associate in Medicine and Director, Division of Bacteriology, Peter Bent Brigham Hospital*

Wednesday, April 26

MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

WOMAN'S AUXILIARY TO THE CONNECTICUT STATE MEDICAL SOCIETY

17TH ANNUAL MEETING Racebrook Country Club, Derby Turnpike, Orange

President: Mrs. Morton Arnold, *Windham Center*
Recording Secretary: Mrs. Harry Knight, *Middletown*
Corresponding Secretary: Mrs. James F. Jones, *Danielson*

10:00 Registration

10:30 Business Meeting
Election of Officers

12:00 Social Hour

1:00 Luncheon
Introduction of Guests

GUEST SPEAKER

AUBREY D. GATES, *Director, Field Service Division, American Medical Association*
"Who Shall Provide for the Ill?"

Induction of Officers

Presentation of President's Pin—Mrs. Morton Arnold, *Windham Center*

Response by Incoming President—Mrs. George Rosenbaum, *West Hartford*

Adjournment

SECTION ON ALLERGY

3:30 Room 104

President: R. Edward Vioni, Bridgeport
Secretary: Marvin Mogil, *New Haven*

THE COMMON COLD AND ALLERGIC RHINITIS—SEASONAL AND PERENNIAL

ABNER M. FUCHS, *New York City; Director of the Department of Allergy, New York University Postgraduate Medical School; Chief, Allergy Clinics of Metropolitan and Bellevue Hospitals*

SECTION ON GASTROENTEROLOGY

3:30 Room 105

President: Max Caplan, *Meriden*
Secretary: H. David Frank, *Bridgeport*

SYMPOSIUM—SURGERY FOR DUODENAL ULCER

CLAUDE E. WELCH, *Boston; Visiting Surgeon and Chief of Tumor Clinic, Massachusetts General Hospital; Associate in Surgery, Harvard Medical School*

LOUIS ZETZEL, *Boston; Visiting Physician and Chief of Gastrointestinal Clinic, Beth Israel Hospital; Assistant Clinical Professor of Medicine, Harvard Medical School*

Wednesday, April 26

SECTION ON NEUROSURGERY

3:30 Room 106

President: William B. Scoville, *Hartford*

Secretary: Franklin Robinson, *New Haven*

Business Meeting

JOINT MEETING

ASSOCIATION OF MEDICAL EXAMINERS OF CONNECTICUT

President: Samuel B. Rentsch, Sr., *Derby*

Secretary: Francis P. A. Williams, *Monroe*

CONNECTICUT SOCIETY OF PATHOLOGISTS

President: George B. McAdams, *Hartford*

Secretary: Edward S. Breakell, *Stamford*

3:30 Auditorium

Modern Approach to Problems of Violent Death

Geoffrey T. Mann, *Richmond, Virginia; Professor and Chairman, Department of Legal Medicine, Division of Forensic Pathology, Medical College of Virginia, Pathologist, John Randolph Hospital and St. Elizabeth's Hospital*

SECTION ON PROCTOLOGY

3:30 Room 107

President: Angelo L. Gentile, *New Haven*

Secretary: Bernard J. Kaplan, *Hartford*

Recent Advances in Chemotherapy For Malignancies of the Lower Gastrointestinal Tract

Paul Calabresi, *New Haven; Instructor in Medicine, Yale University School of Medicine*

SECTION ON UROLOGY

3:30 Room 101

Chairman: B. Marvin Harvard, *New Haven*

Secretary: Robert R. Berneike, *New Haven*

Pyelonephritis

Paul B. Beeson, *New Haven; Ensign Professor of Medicine, Yale University School of Medicine*

CONNECTICUT DIABETES ASSOCIATION

3:30 Room 103

President: M. David Deren, *Bridgeport*

Secretary: James C. Hart, *New Haven*

Is Coronary Artery Disease More Prevalent among Diabetics?

Edward Tolstoi, *New York City; Professor of Clinical Medicine, Cornell University Medical College; Attending Physician in Medicine, New York Hospital*

Wednesday, April 26

CONNECTICUT ASSOCIATION OF MEDICAL RECORD LIBRARIANS

10:00 Room 108

President: Mrs. Jean A. Ryan, *Hartford*

Secretary: Miss Mary Santarsiero, *Manchester*

The Psychiatric Unit in the General Hospital

Thomas P. Detre, *New Haven; Assistant Professor of Psychiatry, Yale University School of Medicine; Assistant Attending Psychiatrist, Grace-New Haven Community Hospital*

The Role of the Radiotherapy Center

Morton M. Kligerman, *New Haven; Professor and Chairman of the Department of Radiology, Yale University School of Medicine; Radiotherapist-in-Chief, Grace-New Haven Community Hospital*

CONNECTICUT CHAPTER OF NATIONAL ASSOCIATION OF SOCIAL WORKERS – MEDICAL SOCIAL WORK SECTION

3:30 Room 110

Chairman: Mrs. Loretta A. White, *Middletown*

Secretary: Miss Pauline L. Throne, *West Hartford*

Communication between Physicians and Social Workers

Harriett M. Bartlett, *Cambridge; Formerly Professor of Social Economy, Simmons College School of Social Work, Boston*

CONNECTICUT SOCIETY OF AMERICAN BOARD INTERNISTS, INC.

3:30 Cafeteria

President: Robert H. Jordan, *New Haven*

Secretary: Robert S. Gordon, *New Haven*

The Role of Anti-Coagulant Therapy in the Treatment of Coronary, Cerebral, and Peripheral Vascular Disease

Moderator: Benedict R. Harris, *New Haven; Associate Clinical Professor of Medicine, Yale University School of Medicine*

Panel: Lycurgus M. Davey, *New Haven; Clinical Instructor in Neurosurgery, Yale University School of Medicine*

Michael Hume, *New Haven; Assistant Professor of Surgery, Yale University School of Medicine*

Joseph R. Bove, *New Haven; Director of Blood Bank; Yale University School of Medicine*

James C. Fox, Jr., *Hartford; Neurologist*

Paul H. Twaddle, *Hartford, Cardiologist*

Arthur J. Geiger, *New Haven; Clinical Professor of Medicine, Yale University School of Medicine*

Wednesday, April 26

ANNUAL DINNER OF THE SOCIETY

New Haven Lawn Club
193 Whitney Avenue
New Haven, Connecticut
7:00

PROGRAM

Introduction of Newly Elected Officers

Ralph L. Gilman, *Storrs, Chairman of the Council*
Thomas M. Feeney, *Hartford, President, presiding*

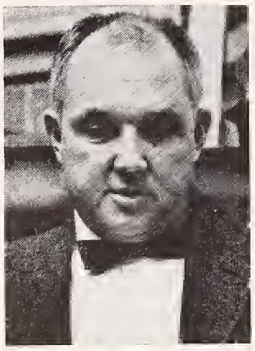
Presentation of Guests and Delegates from State Medical Societies

Fifty Year Membership Awards

Albertus Kellogg Boardman, *New Haven*
Jacob Nemoitin, *Stamford*
Marvin McRae Scarbrough, *New Haven*
Wilder Tileston, *Carmel Valley, California* (*NH County*)

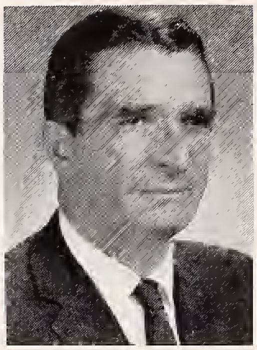
Entertainment

Reservation cards for the Annual Dinner will be included with the program of the meeting which will be distributed to all members, wives of members are invited to attend.

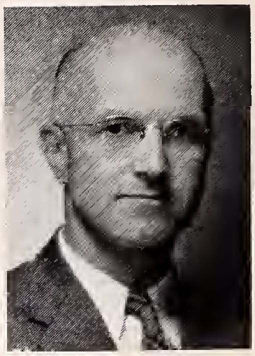


Hon. Thomas B. Curtis
St. Louis

Joseph V. Crecca
Orange, N. J.



Henry Doubilet
New York



Joseph E. Murray
Boston

Thursday, April 27

9:00 Registration—Exhibit Hall

AUDITORIUM

9:05 Film—The Cancer Detection Examination—"Early Diagnosis for Good Prognosis" narrated by Emerson Day, Director of the Strang Detection Clinic, Memorial Center, New York

J. Forbes Rogers, *Stamford, presiding*

10:00 THE MEDICAL COLD WAR

Honorable Thomas B. Curtis, *United States Representative, Second District, St. Louis, Missouri*

11:00 QUESTION AND ANSWER PERIOD

11:10 INTERMISSION TO VISIT TECHNICAL EXHIBITS

W. Zeph Lane, *Stamford, presiding*

11:40 CARDIAC SURGERY IN A COMMUNITY HOSPITAL

Joseph V. Crecca, *Orange, New Jersey; Lecturer, Seton Hall College of Medicine and Dentistry; Associate in Cardio-Vascular and Thoracic Surgery, St. Michael's Hospital, Newark*

12:20 SURGICAL CONSIDERATION IN PANCREATITIS

Henry Doubilet, *New York City; Associate Professor of Surgery, New York University School of Medicine; Visiting Surgeon, Bellevue Hospital* (*Third Division*)

1:00 Luncheon—Cafeteria of the High School

VISIT TO TECHNICAL EXHIBITS

Thursday, April 27

PROGRAM ARRANGED BY THE CONNECTICUT SOCIETY OF AMERICAN BOARD SURGEONS

President: James R. Cullen, *Hartford*
Secretary: William H. Curley, Jr., *Bridgeport*
Program Chairman: John O'Leary Nolan, *Hartford*

James R. Cullen, *Hartford, presiding*

2:00 Experiences with Transplantation of the Human Kidney

Joseph E. Murray, *Boston; Plastic Surgeon, Peter Bent Brigham Hospital; Director of Surgical Research Laboratory, Harvard Medical School*

3:00 Discussion Period

MEETINGS OF SECTIONS OF THE SOCIETY AND GUEST ORGANIZATIONS

SECTION ON ANESTHESIA

3:30 Room 103

President: Edward J. Platz, *Manchester*
Secretary: Sidney A. Chait, *Torrington*

The Micro-Circulation

Leroy D. Vandam, *Boston; Director of Anesthesia, Peter Bent Brigham Hospital; Clinical Professor of Anesthesia, Harvard Medical School*

SECTION ON DERMATOLOGY

Room 108

President: Charles Sheard, *Stamford*
Secretary: Frank M. Castiglione, *New Haven*

2:00 Business Meeting

3:30 Recent Trends in Dermatologic Radiation Therapy

Anthony N. Domonkos, *New York City; Assistant Professor of Clinical Dermatology, Columbia University College of Physicians and Surgeons*

EYE, EAR, NOSE AND THROAT SECTION

2:30

President: Charles J. Petrillo, *New Haven*
Secretary: Arthur C. Unsworth, *Hartford*

(There will be two separate programs, one for the Eye Group and one for the Ear, Nose and Throat Group.)

EYE SECTION — Room 101

Secondary Glaucoma

Paul A. Chandler, *Boston; Associate Clinical Professor of Ophthalmology, Harvard Medical School; Surgeon, Massachusetts Eye and Ear Infirmary*

Thursday, April 27

ENT SECTION — Room 101A

CARCINOMA OF THE LARYNX—A SYMPOSIUM

MORTON M. KLIGERMAN, *New Haven; Professor of Radiology, Yale University School of Medicine; Chairman, Department of Radiology, Grace-New Haven Community Hospital*

JOHN A. KIRCHNER, *New Haven; Associate Professor of Otolaryngology, Yale University School of Medicine; Chairman, Department of Otolaryngology, Yale University School of Medicine*

DONALD P. SHEDD, *New Haven; Associate Professor of Surgery, Yale University School of Medicine*

3:30 COMBINED BUSINESS MEETING

5:30 SOCIAL HOUR—WAVERLY INN, *Cheshire*

6:30 DINNER—WAVERLY INN, *Cheshire*

Guest Speaker

MR. RUDOLPH F. ZALLINGER, *Consultant in Art, Peabody Museum, New Haven*
"EXPEDITION TO THE TROPICAL RAIN FOREST"

JOINT MEETING
SECTION ON OBSTETRICS
CONNECTICUT SOCIETY OF AMERICAN BOARD OBSTETRICIANS AND GYNECOLOGISTS

3:00 Room 105

Chairman: A. Rocke Robertson, *Torrington*
Secretary: Robert H. Wyatt, *Greenwich*

A SYSTEMATIC APPROACH TO THE THERAPY OF SEVERE PRE-ECLAMPSIA AND ECLAMPSIA

CLARENCE D. DAVIS, *New Haven; Associate Professor of Obstetrics and Gynecology, Yale University School of Medicine*

NEW CONCEPTS OF URINARY TRACT INFECTION

LAWRENCE R. FREEDMAN, *New Haven; Assistant Professor of Medicine, Yale University School of Medicine*

SECTION ON ORTHOPEDICS

3:30

New Haven Medical Association, 364 Whitney Avenue, New Haven

Chairman: Edmund Zaglio, *Manchester*
Secretary: Anthony L. Camarda, *Bridgeport*

THE INFANT'S HIP—NORMAL OR DYSPLASTIC

CHARLES T. RYDER, *New York; Orthopedic Surgeon, New York Orthopedic Hospital; Associate Professor of Orthopedic Surgery, Columbia College of Physicians and Surgeons*

COMPLEX FRACTURE OF THE LATERAL MALLEOLUS

SAWNIE R. GASTON, *New York; Surgeon, New York Orthopedic Hospital; Assistant Professor of Clinical Orthopedic Surgery, Columbia College of Physicians and Surgeons*

Thursday, April 27

SECTION ON PHYSICAL MEDICINE

3:30 Cafeteria

President: Samuel A. Schuyler, *West Hartford*
Secretary: Sung J. Liao, *Middlebury*

Physical Medicine Measures Applicable to Dermatological Conditions

Aaron B. Lerner, *New Haven; Professor of Medicine (Dermatology), Yale University School of Medicine*

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

3:30 Room 106

Chairman: Garland L. Weidner, *Waterbury*
Secretary: Louis Spekter, *Hartford*

Program to be Announced

CONNECTICUT DISTRICT BRANCH OF THE AMERICAN PSYCHIATRIC ASSOCIATION

3:30 Room 107

President: Duncan C. Stephens, *Greenwich*
Secretary: George S. Hughes, *Darien*

The Use of Psychotropic Drugs in General Practice

Thomas P. Detre, *New Haven; Assistant Professor of Psychiatry, Yale University School of Medicine*

SECTION ON RADIOLOGY

8:15 Farnam Amphitheater, Grace-New Haven Community Hospital

President: Ralph J. Littwin, *Bristol*
Secretary: Wayne P. Whitcomb, *New Haven*

The Intravenous Cholangiogram—Its Value to the Surgeon

Robert E. Wise, *Boston; Department of Radiology, Lahey Clinic*

CONNECTICUT OCCUPATIONAL THERAPY ASSOCIATION

2:30 Room 104

President: Robert Belyea, *Wapping*
Secretary: Mrs. Ruth Griffin, *W. Hartford*

New Approach to the Rehabilitation of the Chronic Mental Patient

Paul M. deLavergne, *Meriden; Superintendent, Undercliff Hospital*

Thursday, April 27

CONNECTICUT CHAPTER—AMERICAN PHYSICAL THERAPY ASSOCIATION

12:30 Colonial House, Hamden
President: W. Gilbert Wolf, *Hartford*
Secretary: Mary Jane Madden, *Vernon*

2:00 The History of the American Physical Therapy Association and the American Registry of Physical Therapists, and their Present Relationship

Miss Eleanor J. Carlin, *Assistant Director, Division of Physical Therapy, School of Allied Medical Professions, University of Pennsylvania*

3:30 The group will join the Section on Physical Medicine in the Cafeteria of the Hamden High School

HEZEKIAH BEARDSLEY PEDIATRIC CLUB

3:30 Auditorium
President: Daniel F. Harvey, *Hartford*
Secretary: Paul S. Goldstein, *New Haven*

Environmental Factors in the Care of Premature Infants

William A. Silverman, *New York City; Associate Professor of Pediatrics, Columbia College of Physicians and Surgeons; Director of Premature Nursery, Babies Hospital*

ART EXHIBIT
CONNECTICUT PHYSICIANS' ART ASSOCIATION

President: John M. Freiheit, *Waterbury*
Secretary: Mrs. Orvan W. Hess, *North Haven*
Auxiliary Chairman: Mrs. Ernest Rosenthal, *West Hartford*

The 1961 exhibit of the Connecticut Physicians' Art Association will be held during the Annual Meeting on the balcony overlooking the exhibit hall of the Hamden High School. Members of the Woman's Auxiliary to the Society will participate in the exhibit and children of members of the Society have been invited to submit entries.

Exhibits 1961 Annual Meeting

Space	*Firm*	*Location*
1	W. B. Saunders Company	Philadelphia, Pa.
2-3	American Sterilizer Company	Erie, Pennsylvania
4	The D. G. Stoughton Company	Hartford, Conn.
5	E. R. Squibb & Sons	New York, N. Y.
6	A. H. Robins Company, Inc.	Richmond, Va.
7	Connecticut Medical Service, Inc.	New Haven, Conn.
8	Organon, Inc.	West Orange, N. J.
9	G. W. Carnrick Company	Newark, N. J.
10	Geigy Pharmaceuticals	Yonkers, N. Y.
11	Smith, Kline & French Laboratories	Philadelphia, Pa.
12	Doho Chemical Corporation	New York, N. Y.
13	Desitin Chemical Company	Providence, R. I.
14	Schering Corporation	Bloomfield, N. J.
15	J. B. Roerig & Company	New York, N. Y.
16	Eli Lilly & Company	Indianapolis, Ind.
16A	Ciba Pharmaceutical Products, Inc.	Summit, N. J.
17	Parke, Davis & Company	Detroit, Mich.
18	National Drug Company	Philadelphia, Pa.
19	King Merritt & Company, Inc.	West Hartford, Conn.
20	Wampole Laboratories	Stamford, Conn.
21	Charles Bruning Company, Inc.	Devon, Conn.
22	U.S. Vitamin & Pharmaceutical Corporation	New York, N. Y.
23	R. J. Reynolds Tobacco Company	Winston-Salem, N. C.
24	Westwood Pharmaceuticals	Buffalo, N. Y.
25	The S. E. Massengill Company, Inc.	New York, N. Y.
26	Abbott Laboratories	North Chicago, Ill.
27	Pfizer Laboratories	Brooklyn, N. Y.
28	Sandoz Pharmaceuticals	Hanover, N. J.
29	Group Insurers, Inc.	New Haven, Conn.
30	Merck, Sharp & Dohme	Philadelphia, Pa.
31	Professional Equipment Company	Hamden, Conn.
32	The Upjohn Company	Kalamazoo, Mich.
33	Surgeons & Physicians Supply Company	Boston, Mass.
34	Seven-Up Bottling Company	Wethersfield, Conn.
35	Ayerst Laboratories	Little Falls, N. J.
36	The Baker Laboratories, Inc.	Cleveland, Ohio
37	Brewer & Company, Inc.	Worcester, Mass.
38	The Warren Teed Products Company	Columbus, Ohio
39	Thermo-Fax Sales Company	Hamden, Conn.
40	The Coca-Cola Company	Atlanta, Ga.
41	Burroughs Wellcome & Company	Tuckahoe, N. Y.
42	Lessere-Wertheim, Inc.	Bridgeport, Conn.
43	E. F. Mahady Company	Cambridge, Mass.
44	Arthur W. Eade Insurance Agency	New Haven, Conn.
45	Beech Nut Baby Foods	New York, N. Y.
46	G. D. Searle & Company	Chicago, Ill.
47	Meade Johnson & Company	Evansville, Ind.
48	Massachusetts Indemnity & Life Insurance Company	Boston, Mass.
49	Roche Laboratories	Nutley, N. J.

⁂

Exhibit Decorator
Robert F. Stacy, 1090 Page Boulevard, Springfield, Massachusetts

WHITE HOUSE CONFERENCE 1960

MORRIS A. WESSEL, M.D.,* *New Haven*

One year ago I attended as a Connecticut delegate the 1960 White House Conference on Children and Youth called by President Dwight D. Eisenhower "to promote opportunities for children and youth to realize their full potential for a creative life in freedom and in dignity." This conference (the first having been called in 1909 by President Theodore Roosevelt, who wrote 200 invitations in long hand on Christmas Day) serves each decade as an opportunity for representatives of the country to gather and exchange information concerning the needs of young people.

Seven thousand, six hundred delegates poured into Washington on the beautiful Sunday afternoon of March 27, 1960. In addition, there were 500 invited foreign guests and 850 speakers, meeting chairmen, leaders and resource people. The participants came from all fifty states, District of Columbia, Puerto Rico, Virgin Islands, Guam, Samoa, and 75 foreign countries. They included clergymen, industrialists, union leaders, soldiers, sailors, farmers, social workers, nurses, educators, doctors, lawyers, Indian Chiefs, Congressmen, policemen, judges, writers, broadcasters, practitioners of a variety of other vocations, housewives and students. In short, this was a citizen's conference.

Everywhere—in the parks, on the sidewalks; in the elevators, in the hotel lobbies; in the busses and the taxis; in the restaurants and the hamburger stands, groups of people wearing the familiar Conference badge banded together exchanging ideas about problems in their own area. Many delegates worked for more than a year on Committees appointed by their Governor, collecting data describing local conditions. Youth participated, as in Connecticut, in the preparation of many of the reports. Chatting with delegates, one sensed a deep seated interest and concern regarding the problems in each area. Even more important, there was a unanimous wish to learn new ways of meeting the difficulties which children experienced everywhere.

PRELIMINARY REPORTS

The *States Report*,[1] emphasizes that each State and Territory has individual concerns related to social, economic, and geographic facts. Yet there is one recurrent theme: *Although the average American is healthier, lives better, and is better educated than ever before, there is much dissatisfaction among our citizens, and particularly our youth. There is a general feeling of aimlessness and concern about where we are going.* Increasing rates of family breakdown, juvenile delinquency, venereal disease and illegitimacy reflect a discouraging amount of family and community disorganization. Many citizens do not share the benefits of prosperity. Children in some southern states where the per capita income is one half the national average, are unlikely to have adequate housing, education, and other community facilities, which are considered "normal" in other areas.

The report presents a great deal of information which relates to this wide spread restlessness. The rapid increase in the number of young people (30 per cent of the population is under 14) strains community health and education resources everywhere.

There is much mobility among American families. One in five families move annually. Children on the move have difficulty forming lasting relationships. Schools must adjust to boys and girls who come and go. Seventy per cent of the families who move are either managerial employees, or military personnel, and their mobility is *not* due to joblessness. The Indiana report states "A child needs roots, and roots are hard to put down in a mobile society," while New Jersey reports "roots are hard to put down when children move as many times as some of our children do, or even when the child remains and communities change" . . . "Trailer parks can hardly establish stable conditions in which to bring up children." When families move to suburbs, there is need for additional health and educational resources, yet these communities are often unprepared for rapidity of population growth. In 1958, twelve million children moved from house to house, and three million of these moved from one major geographic area to another. Illinois reports specifically "Water supply, sewage disposal, and safe housing and insect control has not kept pace with suburban development." Lower income groups left behind in the "inner city" need increased social welfare facilities. Often members of minority groups can only find housing in abandoned slums, where run down schools, and limited recreational facilities offer little help in their adjustment to the ethnic majority.

---

[1] States Report on Children and Youth—1960.

* *Associate Clinical Professor Pediatrics, Yale University School of Medicine.*

Crowding, mobility, and inadequate housing, with poverty, starvation, and inter-racial tensions superimposed, make a child's life unbearable. These factors lead to deviant behavior and delinquency.

Each State comments on the affluence of our society. Yet each report describes conditions far less than optimum for many children. Kansas reports, for example, that five per cent of their bread winners are "moonlighting" (holding two jobs). This is true for many other parts of the country also.

The depressed economic and social status of the 427,000 migrant workers is particularly appalling. There is great need for their help during the harvest season. Nevertheless, in spite of moving from area to area as the crop season progresses, the average worker is employed less than 20 weeks and earns less than $900.00 each year.

Each State reports concern about family stability. One in three marriages end in divorce. In 1958, 25 per cent of girls of eighteen years of age were married, 16 per cent of those seventeen and 6 per cent of those sixteen. Many communities refuse to admit boys and girls of high school age to school after marriage. They are deprived of education which could help them be more responsible parents and citizens in the years ahead.

School health services provide better resources for determining health defects but there are too many children known to have health conditions which interfere with learning capacity. In Connecticut, 48 per cent of school children suspected of having defects on visual screening examination in 1957 were believed never to have benefitted by a definitive eye examination.

PROGRESS IN THE PAST DECADE

Progress since the 1950 White House Conference is difficult to evaluate. Many States report broadening of health, education, and welfare resources and increased opportunities for vocational training. There are many new facilities for treatment and rehabilitation of juvenile delinquents, with a decrease in *punitive attitudes*. Connecticut is credited with improvement of diagnostic and treatment facilities associated with the juvenile court system. Many state reports describe an increase in professional services in group activities among street gangs with wider use of schools and settlement houses as a base of operation.

Maine, Minnesota, Wisconsin, California, and the District of Columbia have increased facilities for detecting behavior disorders among school children who, if untreated, often develop patterns of delinquency. Funds allotted to broken families, handicapped children, and those with chronic illnesses, have been increased with federal grants. Public responsibility for mentally retarded children has resulted in notable advances in providing facilities for diagnosis and family guidance. The report specifically mentions Connecticut with the development of a State Office of Mental Retardation, with an increase in diagnostic services. School Social Work facilities have increased throughout the country. The experimental project sponsored jointly by the Connecticut Division of Mental Hygiene and the communities in the North Branford and Guilford areas is mentioned as indicative of growth of school social work facilities initiated in local areas and financed by federal and state grants.

Maternal mortality has continued to diminish, and neonatal mortality, though slightly on the increase, is lower than in 1950. Hospital facilities are constantly being expanded throughout the country aided by funds supplied under the Hill Burton Act.

THE CONFERENCE WEEK

With this and other information concerning our children, conference participants flocked to Washington. Eleven thousand delegates, leaders and guests gathered in the evening of March 27, 1960 at the University of Maryland Field House at College Park, to hear President Dwight Eisenhower open the Sixth White House Conference with a declaration of confidence as he said "I have an unshakeable faith in the overwhelming majority of fine earnest, high spirited youngsters who compose this rising generation."

Anticipating some of the problems to be discussed during the Conference, the President stressed the importance of recognizing the effects of the rapid and momentous changes of the current world situation. "You are working," he said, "with the most precious resource of our nation—indeed of the world: a whole generation who will someday make their country's policies and dispose its great power."

Each morning the delegates, divided into five separate Theme Assembly groups of 1,400 members, were addressed by leaders discussing the moral and spiritual challenges which face parents and professional leaders concerned with the welfare of the youth. Governor Munos Marin of Puerto Rico, with extraordinary literary skill, presented the delegates with "the responsibility of seizing effective command of the human spirit for the extension of freedom and knowledge." Drawing from experience in Puerto Rico, where the economic redevelopment known as *Operation Bootstrap* has now been superceeded by *Operation Serenity* with official governmental concern about every citizen's right to live creatively, he warned that "unless we made certain that side by side with technical advances, there be a revolution of rising expectations, we will all be destroyed. We must emphasize," he said, "that contributing is better than acquiring; giving thy neighbor is better than keeping up with thy neighbor."

Rabbi A. J. Heischel, of the Jewish Theological Seminary in New York addressing another Theme Assembly, called on adults to demonstrate their faith in the worth of the individual, by reaffirming the value of learning, worship and charity. "These must be ends, not means" stated he. "We, the grownups, have delegated our moral responsibilities to the schools, the social agencies, or community funds. We have time for hobbies, for watching baseball, but we have not time to help the needy, sustain the sick, offer companionship to the lonely, and no time to offer guidance to our children. Many of us have a fear of growing up and seem to cherish the idea of perpetual adolescence . . . Our greatest threat is the callousness of man . . . We betray our youth if we fail to teach and to live by the principle that the destiny of man is to aid, to serve."

The latter part of each morning was devoted to Forum meetings, (i.e., groups of 350-400) at which individuals representing various fields of social welfare discussed the various practical difficulties which impede professional workers from reaching desired goals. Earl J. Beatt, Executive Secretary of the Family and Children's Service of Minneapolis, opened the first meeting, which I attended, by posing the greatest problem facing social agencies as: *How to reach the families, who caught in economic and emotional forces known to lead to family upheaval, and subsequent breakdown, need help to halt the trend towards deviant behavior, yet were unknown to social agencies* . . . Even when these families are known, social work as a profession is unsure as to how to be helpful, until the "problem" expresses itself in disturbing behavior recognized by society as needing immediate help. "We are guilty of community neglect" he said, "when we do not provide the services to help neglectful parents assume responsibility for their children. Every community should have a coordinated program of (1) services for children and their parents living in their own homes—casework counseling, homemaker services, day care services, school social services; (2) services for children who cannot be with their parents—foster family care, institutional care, emergency shelter care, adoptive services; (3) corrective services for children in conflict with the law."

Later the same morning, Mrs. Florence R. Wyckoff, Chairman of a California Subcommittee on Children of Farm Workers, presented the dilema of migrant families, whose breadwinner works an average only 133 days a year, and has an average annual income of $890.00. Describing a health project sponsored jointly by a California County Medical Society, and a Citizens' Committee representing employers and workers, she presented the poignant fact that when such "basic necessities" as breakfast, lunch, bathing facilities, and medical care were provided to migrant families, there were significant improvement in height, weight and school performance of the children, and increased efficiency among the workers . . .

Dr. Milton J. E. Senn, Chairman of the Pediatrics department at Yale and Director of the Yale Child Study Center, speaking at another Forum session, took to task organized religious institutions for failure to provide spiritual leadership consistent with expressed ideals . . . "To assure the development of 'religion' in a child," he said, "he should have a durable lived experience, close relationships with grownups he sees as models, for whom religion is a felt, meaningful part of their lives." Commenting that many churches and synagogues are primarily social institutions, where it is difficult for parents and children to find any spiritual activity, he described the adolescent who "with intense feelings of right and wrong, his search for ethical and moral leadership his willingness to aspire and to strive for idealistic causes, becomes disillusioned." He praised the Unitarian and Universalist Service Committee and the American Friends Service Committee, for their work in helping mankind and showing youth how to serve others without asking conversion to their faith in return. "Religious educational programs today" he said . . . "must go beyond ancient rites and formulas and strive to understand the natural miracles of mind, energy, and human development. They must face the contemporary life and problems, and gain a greater understanding of the sufficiencies and the insufficiencies of contemporary man. Our children and our youth need and crave experiences through which they may follow their natural inclinations to explore creative heights . . . Children have the potentialities to see that interest in the lives of the other is deeply woven into their own development and that although their own identity constitutes something that is private and personal, it is not isolated from otherselves . . ."

At another Forum session, Harold Fleming, Executive Director of the Southern Regional Council, brought into the foreground the concerns shared by many at the slowness with which school integration is proceeding. Commenting that much of the planning had been done by political leaders, rather than educators, he stated that the plans were "set to placate, not to integrate." He expressed hope that, prominent leaders, particularly those at a national level would offer leadership in the supporting integration plans, and that a century from now "let it not be said that too few spoke too softly."

WORKSHOPS

Each afternoon, delegates met in 210 different workshop groups of approximately 30 individuals to discuss specific areas of particular concern. Assignments to workshops, as well as to the Forum and Theme sections, were made by IBM machines "concerned" with the participants stated interest and at the same time so as to balance representation in each group. Youth participants were assigned to every group. Some of the subjects discussed were "The Improvement of Urban Environments through Physical and Social Planning"; "The Effects of Mobility on Education"; "The Effects of the Affluent Society"; "Current Trends on Marriage and Family Size"; "Problem Families and their Influence on the Young"; "Resources for Cultural Enrichment and Participation in the Arts"; "Films and Plays and their Effects on Children and Youth"; "Infancy"; "Childhood"; "Pre Adolescence"; "Young Adulthood"; "Education for Slow Learners"; "Delinquent Children"; "Neglected Children and Youth"; "Migrant Children and Youth" and "Children of Unmarried Parents."

The workshop to which I was assigned dealt with *Children of Unmarried Parents*. It was led by Miss Mary Allen, Executive Director of the Florence Crittenton Home Association in Chicago. Miss Opal Jacobs, Children's Services of Cleveland, Miss Leontine Young, School of Social Administration at the Ohio State University, and Dr. David Fanschel, Research Director, Child Welfare League of America served as consultants. Included in the group were a High School Student from Dallas, Texas, a young group worker from the Chicago YWCA, a Board Member of a Philadelphia social agency, the Superintendent of Schools of Washington, D. C., the Executive Director of a Cleveland Family Service agency, a former teacher at the New York School of Social Work, a director of a Catholic social agency in Connecticut, a Catholic priest who directed a Seattle welfare agency, a Salvation Army worker, several college students from Foreign countries, an Oklahoma housewife (who introduced every comment with "I'm from Oklahoma, where men are men, and women are glad of it,") nine social workers from voluntary county agencies, a statistician from the Children's Bureau, a sociologist from Iowa, and one lone physician, (the writer).

This group concentrated on discussing human behavior which led up to unmarried parenthood. There was a general concern as to how to improve resources so that a natural mother and father receive the benefit of professional service as soon as possible. The discussion repeatedly focused on the basic fact that deviant behavior preceding unmarried parenthood reflects long standing economic and emotional frustration which has existed throughout childhood and adolescence. Public opinion, it appears, makes it very difficult to help these parents. Society's punitive attitude is often expressed by policies which withhold financial support from unmarried mothers at a time when they are most in need. This only intensifies the feelings of rejection and despondency which are inherent in this experience of unwed parenthood. As Bill Hogan, the high school youth from Texas stated "It's hard to help these kids that get into trouble, when teachers and principals don't let you." Speaking of his own school, he said "Even when they want to come back to school, they aren't allowed to. That isn't right! How are they going to become more responsible as grown up men and women."

Much attention was paid as to means of influencing public opinion so as to remove all too prevalent punitive attitudes and to make every possible health and welfare resource available to the unmarried parents, (both mother and father) and the infant. At times the professional members of the group became involved in terminology unfamiliar to many of the other individuals, and the house wife from Oklahoma repeatedly brought the discussion back to a desirable level by saying "I wish you people would get the fodder down where the calves can eat it" . . .

At the end of the three day workshop, the group formulated a series of resolutions recommending the improvement of resources for unmarried parents, and the strengthening of programs to interpret to the citizens the need of support for social welfare programs. We urged that strong efforts be made to eliminate policies based on punitive attitudes which deny public assistance and other services to unmarried mothers and illegitimate children. These resolutions were included in the final group of 1,600 passed on the last day of the conference.[2]

The participation in the workshop group, with individuals of so varied backgrounds, was a stimulating and exciting experience. The deep concern, particularly of the youth representatives, as to how to improve ways of helping unmarried parents and the infant and of interpreting to the public the need for increased professional services in this area, was apparent throughout the discussion. All of the participants except one were adamant about removing all aspects of a punitive nature from any discussion or service to individuals caught in the forces of maladjustment which lead to unmarried parenthood.

Many of the workshop groups were not as free and easy as was ours. Some leaders were extra permissive and did little to provide any discussion; whereas others steered the discussion away from controversial issues. Some leaders tried to guide the group into their own way of thinking, while other leaders had unusual skill in helping people express their own ideas, yet maintained limitations on the area discussed.

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[2] Published as Recommendations: "A Composite Report of Forum Findings, U. S. Government Printing Office, Price: 35¢.

When one realizes that there were 210 separate workshop groups meeting simultaneously, representing 6,000 individuals and some 600 discussion leaders and consultants, one is impressed with the potentiality provided for greater understanding. The fact that young people, lay and professional workers from many disciplines sat down and talked with each other for a few hours is in itself a great achievement!

Looking back a year later, it is important to think for a moment as to the value of the conference. Most clearly, as Dr. Roswell Johnson, of New Britain, a delegate from Connecticut stated, it was a deeply meaningful experience to see so many individuals gather together and spend so much time and energy seeking new ways of "promoting opportunities for children to lead a more creative life." Comment has been made by Dr. Philip Barba, of the American Academy of Pediatrics, of the sparcity of physicians who participated in the conference. This to me was one of the positive aspects of the conference. I enjoyed being with individuals as deeply concerned as any physician, who with a different background, frame of reference and way of providing service brought points of view and outlooks into discussion which were new to me.

Those of us who had the privilege of participating have been stimulated to seek ways in our own community of working more closely with nonmedical personnel concerned with children's needs. As well as having the largest number of participants (7,600) this conference was outstanding because of the number of young people attending. These young delegates, numbering 17 per cent of the total, were a great asset because their feelings of eagerness, and desire to get things accomplished quickly served to stimulate adults into a desire for rapid progress. All of us who attended were stimulated to seek new ways, new contacts, and new associations with any and all individuals in our local community seeking to improve the welfare of youth. Governor Ribicoff has appointed a committee, (which alas does not include any physician) to work out plans for continuing the activities of the 1960 Governor's White House Committee on Children and Youth.

I look forward to the 1970 Conference, and eagerly anticipate the presence of many of the youth delegates of 1960 as active adult participants in the Seventh White House Conference.

PRESENT USE OF PSYCHOSURGERY*

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In medicine, therapies seem to have their styles and cycles as in clothing. In psychiatry, newer drugs have largely replaced psychosurgery and, to a lesser extent, shock therapy. The results are encouraging and, more important, have lured our psychiatrists back to the organic medical fold from that outer nimbus of mystic environmentalism initiated by Freud and later day psychologists. Although psychosurgery is in temporary eclipse, there still remains a definite need for it in certain psychotic and psychoneurotic illnesses.

Complete lobotomy has been replaced by limited selective operations in the more benign mental ailments and in those malignant psychoses existing in persons of sufficient cultural background.[1–14] Standard lobotomy is used only in deteriorated schizophrenic patients of low cultural level requiring continuous restraint and nursing care. Even in such cases selective undercutting of the superior convexity of the frontal lobes gives a comparable benefit with less personality blunting.[15,16,17] However, the principal application of selective fractional lobotomies is in certain neuroses, in recurrent depressions and in emotional illnesses of the aged.[18,19]

It is felt that repeated shock treatment causes permanent sequelae with an insidious blunting of higher sensitivities and measurable memory loss, exactly as in persons suffering from repeated head injuries. All too frequently, these late effects are blamed on the natural course of the patient's disease. Shock treatment does not prevent a recurrence of depressions, benefit obsessions and tension, nor constitute a safe therapy in the elderly. Therefore, a fractional lobotomy, especially the "orbital undercutting" operation, is advised in those cases of recurrent depressions requiring more than a limited course of shock treatment; in seriously disabling anxiety tension states; in intractable obsessive compulsive syndromes; and in agitated senile emotional states.[20]

The chief criterion for the type and location of the newer selective operations should be a maximum improvement with a minimum of personality deficit, and with a technique which can be exactly duplicated from patient to patient.[21] Cutting[7,22] or electrocoagulation[6] of the bilateral inferior quadrants of the prefrontal lobes satisfies the first two

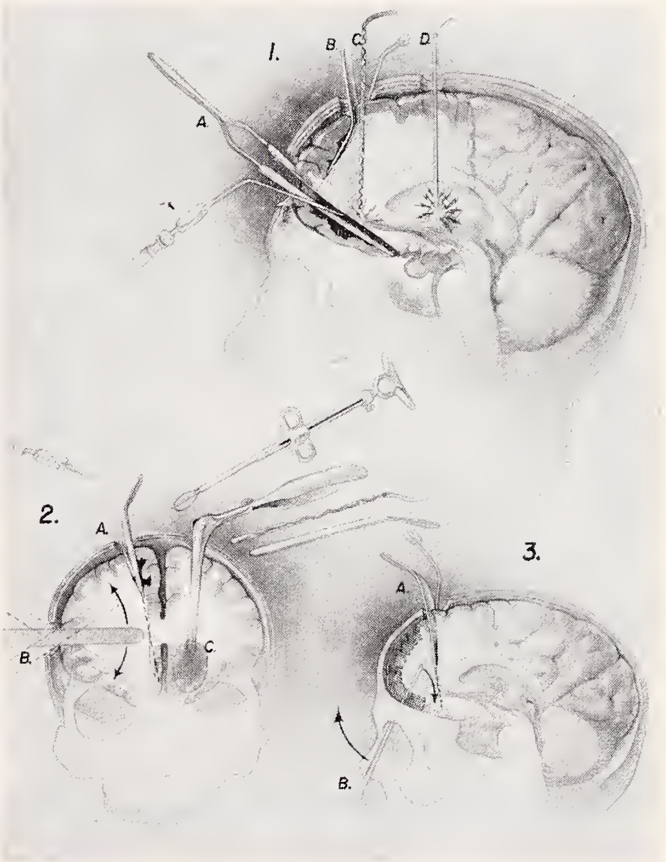

Figure 1*

(1) A. Scoville's orbital undercutting. B. Scoville's undercutting of superior convexity. C. Grantham's electrocoagulation of inferior medial quadrant. D. Spiegel and Wycis' stereotaxic electrocoagulation of thalamic nucleus. (2) A. Scoville's cingulate gyrus undercutting. Livingston's cingulate gyrus subcortical sectioning. B. Freeman and Watts' "closed" standard lobotomy. C. Medial inferior quadrant section by McKenzie's leucotome method, Schwarz' nasal speculum method, Grantham's electrocautery method, and Poppen's direct vision suction and spatula method. (3) A. Lyerly and Poppen's "open" standard lobotomy under direct vision. B. Fiamberti and Freeman's transorbital lobotomy. Arrows indicate deep frontal cut. Line hatching indicates Pool's original topectomy. Dotted hatching indicates his present topectomy of the superior and inferior tips of the frontal lobes.

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criteria but exact duplication is difficult because of their hidden depth at a site of concentrated nerve fibers. "Undercutting" of the orbital surface or "orbital undercutting"[21,23] offers the advantages of direct vision over a wide surface location, far removed from converging, concentrated nerve bundles, and with preservation of adjacent blood supply. The superior convexity of the frontal lobes appears related to higher mental functions, while the inferior orbital surface more related to emotions and visceral sensation.[2] Undercutting of the superior convexity is advised in schizophrenia while undercutting of the orbital surface is preferable in all benign illnesses including intractable neuroses, depressions and senile states[20,23] although LeBeau,[8] Busch,[2] and Cairns[1] in Europe and Livingston[24] and Ward[25] in the United States have advocated undercutting or sectioning of the medial surfaces (cingulate gyrus) for the treatment of pure obsessive compulsive neuroses. The importance of this has not been confirmed by the writer.[20,26] The late results of orbital undercutting are markedly superior to the earlier results in both schizophrenia and benign illnesses. To date, there have been no recurrences of cyclic depressions following this operation.[27]

The transorbital lobotomy of Fiamberti[28] and later Freeman,[4] in spite of its extreme simplicity, is not desirable in the more benign illnesses because of its complete lack of precision. When done, it should be performed by surgeons and not psychiatrists. Bilateral fractional ablations of the medial surface of the temporal lobes have not shown sufficient benefit to warrant use in any of the mental illnesses,[29] although the writer has confirmed in monkeys the "gentling" effect demonstrated by Klüver and Bucy with their more massive removals, and noted memory loss in humans[3] following bilateral removal of the hippocampal complex. The septal area appears to be the only area within the frontal lobes exhibiting marked physiologic sensitivity.[31]

In the malignant psychoses, especially schizophrenia, it is increasingly apparent that ablations of surface areas, or their connections, benefit only by a blunting or burying of the delusions and hallucinations. There is little effect on the fundamental mechanisms of these psychoses. But lesions in and about the deeper midline structures of the septal areas, the hypothalamus, the mammillary bodies and the reticular systems can, and sometimes do, duplicate many of the catatonic, confusional and confabulatory syndromes present in such psychoses.[26,31] Stereotaxic lesions and drug research confirm this. Unfortunately, to date such lesions cause rather than remedy such syndromes. Future therapy in schizophrenia should include the development of stereotaxic, chemical, electrical or surgical methods for the alteration of function of the deeper midline structures of the upper brain stem and diencephalon.

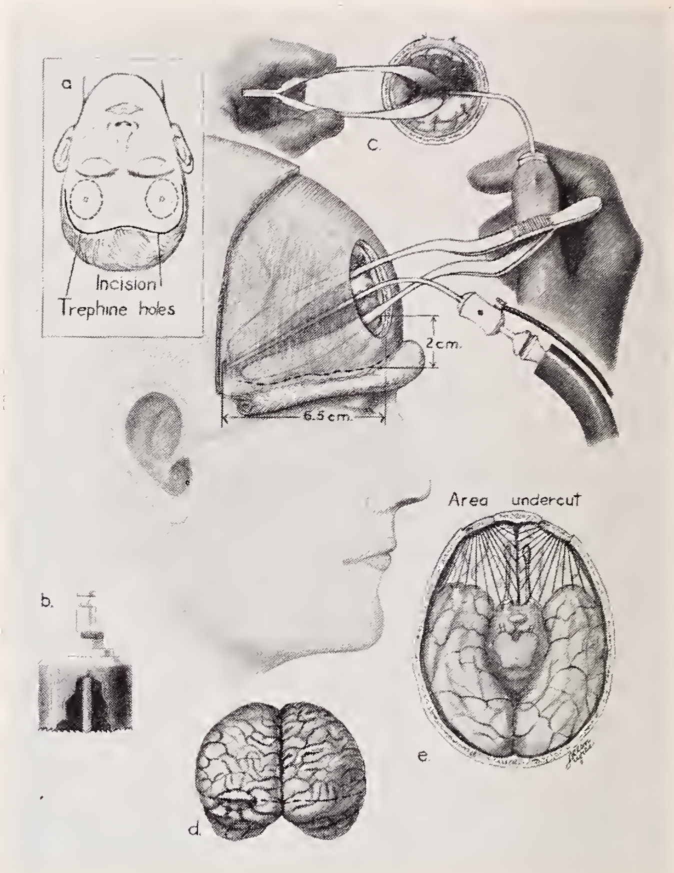

FIGURE II**
Orbital undercutting technique.

SUMMARY:

1. Psychosurgery continues to have definite applications especially in the intractable psychoneuroses, in the agitated states of the elderly, and in recurrent involutional or cyclic depressions.
2. It is preferable to shock therapy in those depressions requiring more than short courses of shock treatment, because of less emotional blunting, less memory loss and less chance of recurrence.
3. Complete lobotomy has been replaced by limited selective operations except for deteriorated unmanageable schizophrenic patients of poor cultural background. Undercutting of the orbital cortex offers the advantage of precise technique under direct vision in an area causing an appreciable lift in mood, lessening of anxiety and a minimum of personality blunting. Results have been excellent in depressions without recurrences to date; and very

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good in anxiety-tension states, especially of the elderly; and in obsessive-compulsive neuroses.

4. Anterior cingulate interruptions, not confirmed by the writer, are advocated by some for these obsessive-compulsive neuroses.

5. Agitated, depressed, senile states react even more favorably to limited lobotomy operations than in the younger age group, and this surgery is probably safer than repeated shock treatment.

6. Late results of orbital undercutting are superior to the early in all categories of mental illnesses and to date there have been no recurrences in depressions undergoing this operation.

7. Removal of the frontal and temporal lobe surface areas or their connections has little effect on the fundamental mechanism of schizophrenia, the benefits appearing to be non-specific and quantitative rather than qualitative. Future research in schizophrenia may lie in the development of chemical, stereotaxic, electrical, or surgical alterations of function of the deeper midline structures of the septal, hypothalamic and reticular systems.

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BILATERAL AND UNILATERAL ACTIVATION OF THE DIAPHRAGM IN THE INTACT HUMAN

EXTERNAL ELECTRICAL STIMULATION BY CAPACITIVE COUPLING AS RECORDED BY CINERADIOGRAPHY

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Developments in the field of clinical cardiopulmonary physiology have led to newer treatment techniques in cardiopulmonary disease. There is now a tendency to utilize electrical and mechanical aids to increase or initiate diaphragm motion in the treatment of obstructive emphysema, pulmonary congestion, acute pulmonary emphysema, bronchial infection, asthma, and empyema. Hon and Hulme[1] have discussed electronic resuscitators for use in asphyxia neonatorum. Gray and Field[2] have evaluated such devices as an aid in the treatment of cardiopulmonary disease. The principle action of electronic resuscitators when used for the above mentioned purposes, is the production of diaphragm contraction, rib cage expansion, and abdominal muscle contraction. This paper is concerned with the objective demonstration of the effects of the electrical activation of the diaphragm and rib cage in normal intact humans.

The question arises with regard to any specific electrical apparatus as to whether it is actually instrumental in producing active contraction of the diaphragm, or is stimulating contraction indirectly through various other mechanisms. These would include the patient's voluntary respiratory synchronization with electrical stimulation and involuntary "gasp" reflex activity. Currently available apparatus which best lends itself to study in these areas is the electronic neuromuscular stimulator or neuroactivator.

This device, which is used in the present study, will be described later.† It is appropriate at this time to review other electrical stimulating techniques, which have been used for the same purpose. The method of Sarnoff, Hardenburgh and Whittenberger[3] utilizes stimulation of the phrenic nerve at the base of the neck. Diaphragm contraction is initiated by the applied electrical impulse which is conducted down the nerve to the diaphragm. Disadvantages of this technique lie in the difficulty of locating the phrenic nerve and in the lack of acceptance by ambulatory patients requiring repetitive chronic treatment. Knott has described[4, 5] the use of Hoffman's apparatus which involves the application of ring electrodes around the thorax. With this method, high currents are required with low voltage application. Low skin resistence is needed. Placement of the electrodes is complicated. Holmes, et al have used the Hoffman machine in treatment of chronic lung diseases.[6] The site of action of the device has not been determined. Knodt has postulated direct stimulation of the muscle of the diaphragm. But evaluation is difficult because of the possibility of volume or surface conduction to central and peripheral neural pathways.

There is a distinct advantage in using another type of device, the electronic neuroactivator, for initiating diaphragm contraction.† Electric current *from the machine* is *not* conducted *through* any portion of the body. Instead, localized, high, positive, electric charge is applied to a relatively small area of skin as described below. The intensity of charge is cyclically increased to the point where a "triggering effect" takes place and underlying muscles contact.

Since the phenomenon is readily observed when only *one* electrode is applied, activation of muscle by direct conduction through body tissue to muscle cells is not believed to be the mode of operation. Hon[1] has used the Batrow appartus to produce contraction of the diaphragm in rabbits and notes that the action is stopped by blocking the myoneural junction with intravenous injection of succinylcoline chloride. His description of diaphragm activity is based on direct observation at laparotomy.

The mechanism of action of the neuroactivator on the diaphragm in the intact human has not been established. For one thing, any theory is open to criticism regarding the difficulty in evaluating possible contributory effects of voluntary effort or gasping reflex in producing diaphragm contraction. In fact, serious question has been raised as to whether this type of stimulation has any effect at all on the diaphragm. The experiments to be described constitute as effort to exclude the obscuring effects of both of the above factors in the normal unanesthetized human, to clarify the role of the device itself in the action of the diaphragm.

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† Bartow Ventilaid, Bartow Laboratories, Branford, Connecticut.

APPARATUS

A Batrow electronic neuromuscular stimulator was utilized for all studies. Description of its construction is available in papers by Hon.[1] The mode of operation of this device may be described briefly as follows. In principle, a generator produces a pulsating high voltage waveform which ranges from 0 to approximately 60,000 volts at a current of 0 to 27 microamperes. Each pulse is very highly damped with the first half of the wave predominating for approximately seven micro-seconds. Pulse repetition rate of 60 per second was used in these experiments. The output circuit includes an applicator which permits capacitor coupling of the high voltage circuit to the body. This technique constitutes a perfectly safe method for applying the high voltage—low current pulses to the patient. The actual wave-form is very close to the type of motor discharge normally conducted by the phrenic nerve in activating diaphragm contraction. There is little discomfort from the electrical stimulus, since motor nerves to the muscle, only, are affected; sensory nerves do not appear to be stimulated.

The applicator consists of a sealed glass tube containing gas (argon) which ionizes with the passage of electric current. The tubing is covered by a sponge which is moistened. The entire assembly is then pressed to the skin. The area of contact is about two cm. in diameter. Capactive coupling is effected by the action of the body-skin as one electrode, the glass as dielectric, and the column of ionized gas within the tube as a second electrode. During the surges of voltage, a high positive charge is placed on the skin at the area of contact. Eventually, a strong field is built up by the accumulating charge sufficient to "trigger" motor impulses along the phrenic and intercostal nerves. The intermediate pathways between the site of the charge build-up and the roots of the phrenic nerve have not yet been established.

Fluoroscopic images of the moving diaphragm were recorded by a Cineray machine, consisting of a 16 mm. motion-picture camera whose shutter is synchronous with the line voltage peaks of the x-ray fluoroscopic tube. The camera surveys a field, 15 inches in width on a fluoroscopic screen, with the aid of a fast lens.

Shutter speeds of 15 and 30 frames per second were utilized. X-ray tube factors were 125 K.V. at 37 ma. (Exposures were kept very short to keep down radiation to the patient). An indicating device was attached to the fluoroscopic screen to register exact on-and-off times of electrical stimulation.

Neuroactivation Of "Normal" Inspiration

EXPERIMENTS:

1. *Bilateral Diaphragm Contraction.*

The glass electrode of the machine was covered with a moistened rectangular sponge, a corner of which was pressed over the xiphi-sternum with the patient standing erect. The ground electrode was placed under his feet. Controls on the neuromuscular stimulator were set to produce a stimulus at twice the normal respiratory rate of the patient. The patient was then instructed to breathe with normal tidal respiratory effort while resultant diaphragm excursions were cine-radiographed by the Cineray apparatus. The Batrow stimulator was then turned on and off at intervals and effectively "took over" the inspiratory effort of the patient at exactly the rate of stimulation during the periods of application. Symmetrical, simultaneous contractions of the diaphragm leaves on both sides were recorded. (Figure 1) Excursion rate decreased to normal tidal rate with cessation of stimulus. Motion of the rib cage was also synchronous with stimulus but appeared to *precede* descent of the diaphragm by a fraction of a second. On moving the sternal electrode only a few millimeters away in any direction from its apparently critical location over the ziphoid process, the patient reverted to normal inspiratory rate with little apparent effect of the device on the diaphragm, despite, deliberate marked increase in charge intensity. The important exceptions to these observations constitute the next experiment.

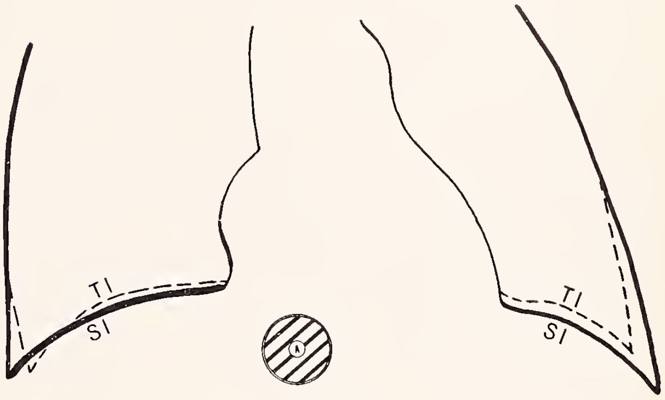

FIGURE I

Level of diaphragm in tidal inspiration compared with inspiratory level produced by stimulation. A. Site of applicator for symmetrical stimulus. TI, Tidal inspiration. SI, stimulated inspiration.

II. *Unilateral Diaphragm Contraction.*

Using the same apparatus and patient described above, the sponge-covered electrode was moved over the thorax. In a small area in the left seventh anterior intercostal space in the nipple line, it was

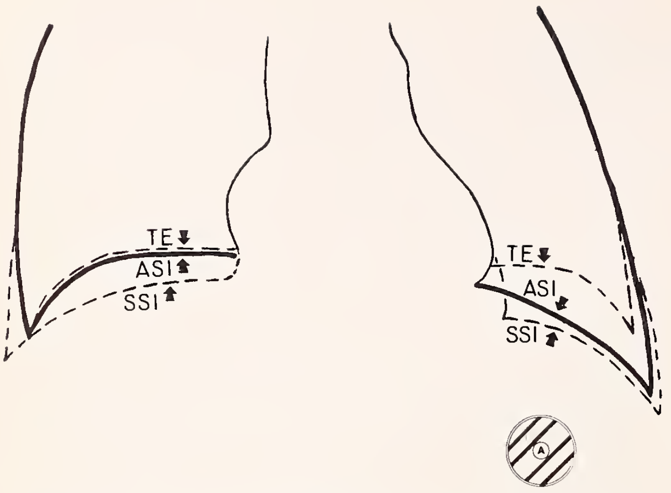

Figure II

Comparison of diaphragm response with symmetrical and asymmetrical placement of applicator. A, site of applicator during asymmetrical stimulus in seventh anterior rib space. ASI, represents corresponding inspiratory level of diaphragm (solid lines). Levels obtained during symmetrical stimulation are shown by dotted lines SSI. TE represents tidal expiration levels.

observed that another critical point had been reached. (Figure 2). Here, however, it was found that contraction of the left leaf, predominated, and occurred synchronously with stimulus. The peripheral portion of the leaf appeared to contract more forcibly than the central portion. When the stimulus was applied during the terminal portion of the normal *expiratory* phase, the right diaphragm leaf moved very slightly downward while the left leaf contracted forcefully downward and medially away from the lateral thoracic wall. The rib cage on the left side contracted simultaneously in asymmetry to the right. With the electrode maintained in the eccentric position, the patient was instructed to breathe in continuous forced expiration from deep inspiration while stimulus was applied intermittently. The left diaphragm consistently contracted during stimulus, against the voluntary increase in intra-abdominal pressure while right left motion was negligible. Experiments performed with electrode placement in a comparable position in the *right* seventh intercostal space exactly reversed the leaf and thorax excursions described above.

SUMMARY

An electronic neuromuscular stimulator utilizing capactive coupling to the body has produced bilateral and unilateral contraction of the diaphragm leaves in the intact unanesthetized human. Contractions were photographed by cinefluorography. They are bilateral and symmetrical when electrode placement is central over the ziphoid process. Unilateral contraction predominates with critical, asymmetrical electrode placement. Both types of contraction are initiated by the stimulator against the patient's attempts to resist its action.

CONCLUSION

1. The Batrow stimulator does activate the diaphragm over and above conscious voluntary effort and gasp reflex in the intact human.

2. Use of this type of device in which *body* conduction is reduced to a minimum may lead to better understanding of the neurophysiology of the respiratory muscles in particular, and the muscular and nervous system in general.

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COUGH AS A SYMPTOM OF A BRAIN TUMOR

JACOB GREENBLATT, M.D., *Stamford*

AMONG the common complaints confronting the practicing physician (pediatrician, in particular), cough certainly is a frequent one. In a systematic search for the causes of cough in leading textbooks of neurology and pediatrics,[1–5, 13–15] as well as in books devoted to differential diagnosis,[6–10] none of them—including indexed periodicals since 1950—mention the possibility that a cough could be a symptom of a brain tumor. That this can be the case is brought out by the following case report:

A nine year old white male was admitted to Stamford Hospital on August 2, 1959 with a chief complaint of cough of four weeks duration. The cough was infrequent, brassy-sounding, and was unaccompanied by chest pain, expectoration, or fever. Frequently, non-projectile emesis occurred, but only on coughing. He also complained of weakness and fatigue. At the onset of the illness, there were no abnormal signs, and cough mixtures were administered without improvement. He was hospitalized for further study.

Family history was not noteworthy except for a paternal grandmother with diabetes. There was no family history of cancer. Past history revealed the usual childhood diseases of measles, mumps, and rubella. He had been subject to asthma between 1½ and four years of age. He had never had pertussis. He received the usual immunizations; his development was normal.

Examination revealed a well developed, well nourished boy of the stated age. He was alert and cooperative. No abnormalities were elicited on examination. The pupils reacted to light; patellar tendon reflexes were active.

In the hospital he also had an intermittent brassy cough with emesis, and an inclination to sleep both night and day. Because the chest x-ray, laboratory studies, blood count, urinalysis, cough plate, and temperature were all normal, the author was led to suspect an abnormality of the nervous system insofar as the aforementioned hypersomnia was the only positive finding. Accordingly, a more detailed neurlogical examination was done on the third hospital day, and this elicited a positive Romberg sign. On the following day, after pupillary dilation, bilateral papilledema was found. Further inquiry at this time revealed that he had had occasional sudden attacks of pain in the back of the head for a few weeks preceding his entry into the hospital. Neurological examination by Dr. E. Mulford revealed right nystagmus, ataxia, and a tendency to tilt the head to the right. It was further noted that his signs varied from day to day, for on some days his Romberg sign was absent. A skull x-ray was reported as negative.

On August 10th, a ventriculogram revealed a symmetrical hydrocephalus with obstruction of the upper third of the acqueduct of Sylvius. This was interpreted as being due to a midline tumor of the posterior fossa. An electroencephalogram on August 7th revealed "a severe diffuse EEG abnormality, greatest in the left posterioir area. These findings are consistent with a structural brain disorder." Ophthalmoscopic examination by Dr. P. Ostriker confirmed the presence of bilateral papilledema, which was more marked on the right, together with venous congestion.

On August 12th a suboccipital craniotomy was performed by Dr. Mulford, who noted the following:

"A mushroom-shaped mass of grayish pink tissue occupied almost the entire space in the upper cervical canal and interhemispheral portion of the cisterna magna. It rose from the floor of the fourth ventricle and was intimately associated with the posterior inferior cerebellar artery, which wrapped itself around the middle of the tumor. An accessory nodule was also found in the upper cervical area between C1 and C2 on the left. Manipulation of the tumor produced marked changes in the respiratory rate. Therefore, we were dealing with a

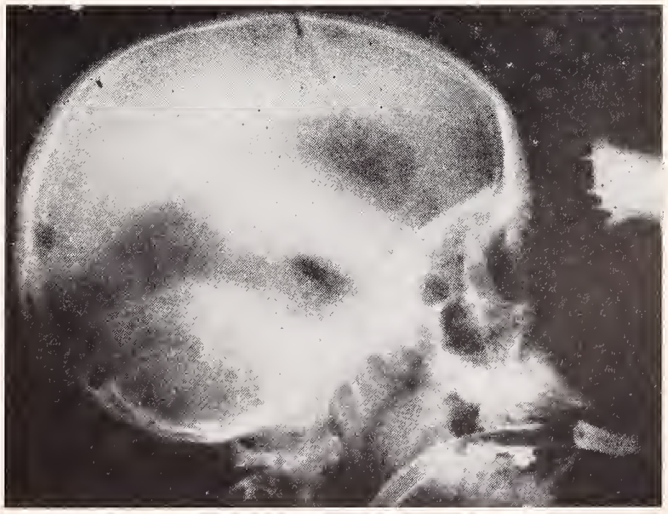

FIGURE I
Pneumoencephalogram (right lateral) showing dilatation of ventricles.

tumor which had already invaded the brainstem and, was impossible to remove completely. As much as possible of the tumor was removed. The nodule was left alone." After the operation the cough stopped and did not recur. Vision, which had become seriously impaired after the ventriculogram, gradually improved. X-ray therapy was directed at the portions of the tumor which could not be resected. The patient was discharged on August 30th, definitely more alert than when he had entered. The histological diagnosis of the tumor was ependymoma.

COMMENT:

The sudden cessation of the cough following surgical removal of the tumor supports the view that this symptom was produced by it. The tumor, being in a position above the medulla, probably compressed the cough center,[11] which is believed to be near the respiratory center. This cough center is also stated to be near the vomiting center.[12] Interestingly enough, the patient had respiratory changes when the tumor was manipulated during the operation. He also had emesis during his illness.

In working up this case, every effort was made to rule out other causes for cough. Physical examination of the chest, x-ray of the lungs, and a cough plate did not reveal cause for it in the chest; such as, infection, lung tumor, cardiac failure, or mediastinal neoplasm. There was no evidence of bronchitis or bronchial obstruction. Nor were there any voice changes to indicate laryngeal pathology; this also ruled against laryngeal nerve disease. The auditory canals were clear, thereby eliminating this cause for cough. Another factor to be considered is that if the cough had been due to any infectious cause, the inhalation anaesthesia would have aggravated it.

The idea that a cough can be caused by a brain tumor is a new one, but it seems to be the fact in this case. It is hoped that this report will stimulate other observers to be alert to the possibility that brain pathology may give rise to cough as a symptom.

ADDENDA

The patient expired on Nov. 10, 1960 from this tumor. There was no recurrence of the cough at any time; apparently the craniectomy relieved the pressure.

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COSMETICS: THE DERMATOLOGIST'S RESPONSIBILITY TO THE PRODUCT, THE PATIENT, AND THE PROFESSION

HERBERT J. SPOOR, M.D., *New York, N. Y.*

SYNOPSIS 3

Adverse skin reactions after use of cosmetic materials are described and classified so that their clinical recognition may be facilitated. The means by which the offending cosmetic may be identified are presented. The importance of identifying the offender, not only from the standpoint of medical care for the patient but also from that of a medico-legal responsibility to the patient, product and profession is shown. Finally, the need for adequate research planned so as to minimize misleading promotion or inadvertent misuse of cosmetic products is emphasized.

OUR next consideration is "What do we owe the patient?" No matter how we may anticipate trouble, some patients will develop reactions to cosmetics. The simplest of these are, of course, the direct sensitization reactions, and the more complicated are those from the active ingredients. Both types of reactions are produced so frequently that they are often recognized by the individual user and never presented to the physician. Those that we do see are usually the atypical reactions and in these instances a diagnostic patch test is the most satisfactory way to confirm a suspicion of cosmetic injury. Rather than approaching the diagnosis of a possible cosmetic reaction simply on the basis of non-reactive and active agents as discussed earlier, I find it more useful for purposes of diagnosis to group these reactions in terms of site and type of skin response. All skin reactions obtained from cosmetics can be classified into the following six groups:

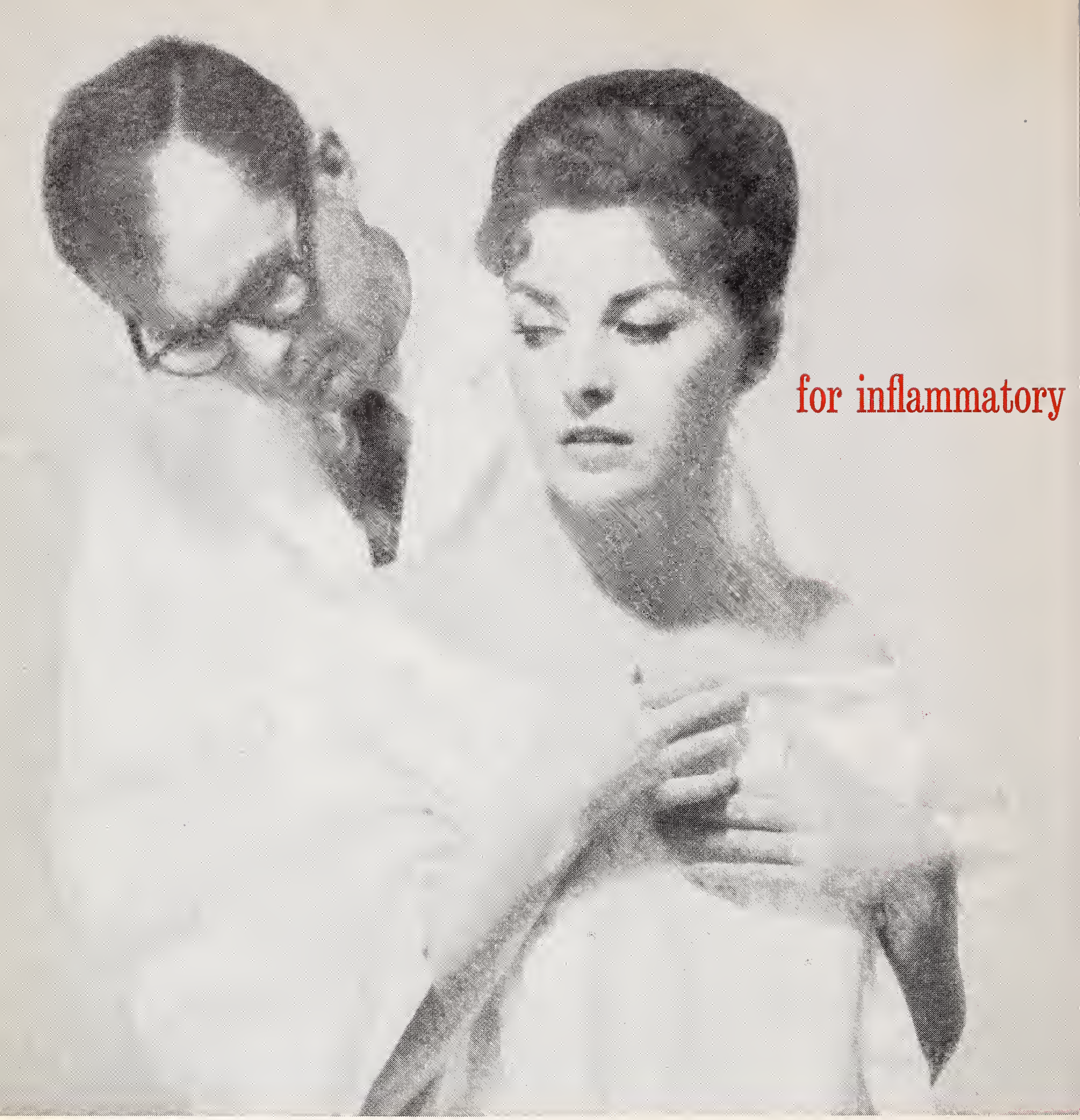
1. Direct irritation at application site;
2. Local sensitization at application site;
3. Sensitization and adverse tissue reaction at application site;
4. Irritation and adverse tissue reaction at application site;
5. Sensitization reactions at application site and beyond;
6. Sensitization reactions at areas other than the application sites.

Examples of each of these type reactions are:

1. Soaps and cleansers;
2. Perfumes, directly or from another cosmetic;
3. Lipstick, eye shadow, depilatory;
4. Deodorant reactions, including zirconium;[11]
5. Hair dye preparations;
6. Nail polishes.

But, the dermatologist's responsibility to his patient goes even beyond the recognition and treatment of a cosmetic dermatitis. All too frequently he must assume the medico-legal responsibility for any assertions that have been made. He must take care to be objective and he must remain an unbiased "expert." If actual damage has been produced, it must be proved that the cosmetic agent suspected was actually responsible for inducing the injury. There is nothing more satisfactory for this proof than a photograph of the dermatosis and a simultaneous photograph of a positive allergic reaction as illustrated by patch test. The next figure shows a composite, incriminating a shampoo agent that none of us find particularly troublesome, but, in this particular instance, it caused dermatitis of the scalp and definitely produced a poliosis, which so far has been permanent. One cannot emphasize too strongly that the doctor must be the expert himself, because, if the doctor is not the expert and does not have proof positive for every statement he makes, then the opposition lawyer will soon prove himself to be the expert, with disastrous results for both the doctor and the person or company he represents.

Now, what are the dermatologist's responsibilities to the profession of medicine, particularly as pertains to cosmetics and cosmetic claims? His responsibility, primarily, is that if he, as a physician, supports a claim expressing the value of a particular product, that claim must be based upon fact, scientific fact, rather than clinical impression or innuendo. We are all to familiar with the unsupported claims that *presumably* have been based upon dermatological fact. A few examples are



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The anti-inflammatory and antipruritic efficacy of triamcinolone acetonide was shown by the prompt control of itching and resolution of affected areas. Cahn, M. M., and Levy, E. J.: A Comparison of Topical Corticosteroids: Triamcinolone Acetonide, Prednisolone, Fluorometholone, and Hydrocortisone.

Antibiotic Med. & Clin. Ther. 6:734 [Dec.] 1959.

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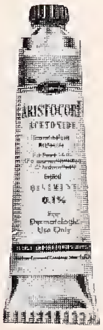

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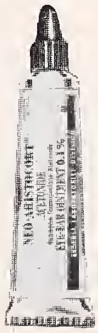

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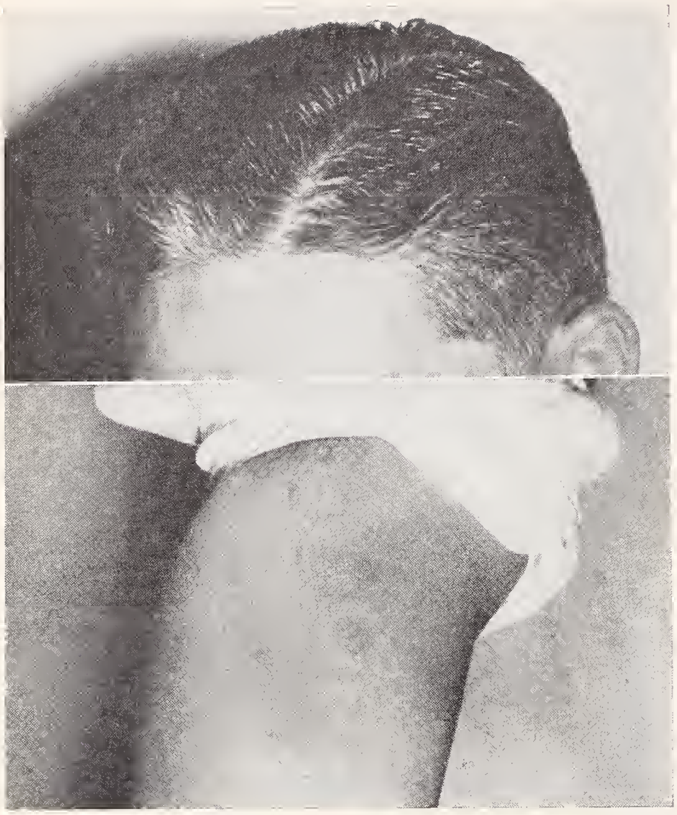

Figure 6.

"Leucoderma Scalp—Positive Patch Test to the alleged offending agent."

these: Dermatologists have reported that squalene was present in sebum. Squalene is found chemically to be present in shark oil; therefore, shark oil is the ideal treatment for the skin because it replaces that that the skin lacks. The quantity of squalene present in sebum is very small. Whether it serves any useful purpose is open to question, but there are strong claims made for the use of shark oil and these are supported by dermatological evidence. Another example is that an investigator found that an allantoin ointment was a satisfactory emollient and fairly useful for the treatment of hyperkeratosis. So we now have a new therapy for the treatment of psoriasis and, cosmetically, a new ingredient which is said to cause regeneration and regulation of the rate of growth of the epidermis.

Still another example of this type is that Vitamin D is presumably produced by exposure of the skin to sunlight; therefore, cod-liver oil is the ideal ingredient for addition to creams, because cod-liver oil contains copious quantities of Vitamin D.

Still another, and one that I myself may have been used as a reference for,[12] is that pantothenic acid, when given internally, definitely influences the hair growth rates in rats and the pigment changes in rats; therefore, if pantothenic acid, or one of its derivatives, is added to a hair preparation, it will stimulate the growth of better hair and improve the color of the existing hair in the human.

These examples mean only that we as physicians must tighten up our scientific thinking and be more careful about publishing statements that can be misconstrued. We owe this support to each other, and to our profession.

Our responsibilities to the profession are to not make relatively loose statements or loose comparisons just because they sound plausible, but, particularly when dealing with cosmetics, especially when there is going to be any claim material based upon the doctor's word about the cosmetic, he should bridle his pen. His investigations should have adequate, proper, experimental design. They should be specifically aimed at proving the points of claim scientifically. If this cannot be done, the claims should not be made. The day that a medical opinion, as such, was of value, just because it came from a doctor, is gone. Today, we too must support our opinions with facts.

I do not mean that we practitioners should give up investigation, observation, or publication. Nor should we acknowledge over-all superiority to the research laboratory team. All the instrumentation in medical science produces nothing of value unless properly guided by mature clinical observation. Each of us as a clinical investigator should present for publication only work which we ourselves feel has been properly controlled, and draw conclusions that we ourselves can support and defend. We cannot expect the reviewing boards of the journals to carry the entire responsibility for accuracy and adequacy of the data submitted to them, and, by the same token, we must share with them the task of preventing the publication of non-controlled, inadequate, or misinterpreted data.

Now, in summary: Cosmetics are here to stay. The trend will be toward the production of ever more active cosmetics. If the interpretation of the law remains as it is, i.e., that a material which affects the skin or its appendages only is a cosmetic and is sold under the cosmetic laws, then, despite the fact that the skin and those appendages represent an organ comprising some 16 per cent of the body weight—this field will be in the realm of over-the-counter treatment. This is our field as dermatologists. We owe it to ourselves to know what the products are that are being sold, what they are supposed to do, how they act. We must know what they do to the patient. We must know what they do not do to the patient. And we must be able to draw a fine line between problems caused by company negligence, perhaps, and those caused by the patient's idiosyncracy or pre-existing non-related medical condition.

Finally, to ourselves and to our profession, we must stop working on the premise that anything the doctor says is gospel. We must become scientific. The work that is used to support claims made by the so-called "active" cosmetics must be even more accurate, even more carefully controlled, than that which is reported in other phases of medicine because other fields of medicine will always be under strict control by medical authority, while that of cosmetics will always be an over-the-counter industry, where the dermatologist is at best only a helpful consultant.

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This is the last of a series of three articles.

PLEASE NOTE
DATE LISTING SERVICE

Realizing that all too often the number of members who attend meetings of medical organizations is disappointingly small and that, in part at least, this curtailment of attendance is frequently brought about by one or more conflicts with other meetings, the Society's office has instituted a minor but potentially important service for the use of all legitimate medical organizations who may wish to avoid such conflicts.

Any group may notify this office of the time, place, and date on which it plans to hold a meeting. The information will be recorded and, if time permits, published in *Connecticut Medicine.* In addition, this knowledge will enable us to advise inquiring program chairmen as to the nature and dates of meetings already scheduled and allow them to determine whether or not those meetings will adversely affect their own or vice versa. It stands to reason that early listings will increase the efficiency of the plan.

This will be strictly a date clearance service; *not a date booking bureau.* The Society obviously has no prerogative to set or change dates for any meetings but its own. Those interested in utilizing this service may write to the Connecticut State Medical Society, 160 St. Ronan Street, New Haven 11, Connecticut or call New Haven, UN 5-0587.

ANNUAL COUNTY ASSOCIATION MEETINGS

New Haven, Thursday, March 23

WAVERLY INN, CHESHIRE

Business Meeting: 2:30 P.M.

Social Hour: 6:30
Dinner: 7:00

Hartford, Wednesday, April 5

HOTEL STATLER, HARTFORD

Business Meeting: 5:00 P.M.

Social Hour: 7:00-7:30 P.M.
Dinner: 7:30 P.M.

Speaker: Representative Emilio Q. Daddario
Subject: "What The Space Program Means To Medical Science."

New London, Thursday, April 6

NORWICH INN, NORWICH

Social Hour: 5:30 P.M.

Dinner: 6:30 P.M.

Business Meeting: 8:00 P.M.

Fairfield, Tuesday, April 11

STRATFIELD HOTEL, BRIDGEPORT

Business Meeting: 4:00 P.M.

Dinner: 7:00 P.M.

Speaker: Professor Challis A. Hall, Jr., Department of Economics, Yale University
Subject: "A Tax Program For Rapid Economic Growth."

Litchfield, Tuesday, April 11

TORRINGTON COUNTRY CLUB, TORRINGTON

Business Meeting: 5:30 P.M.

Cocktail Hour: 6:30 P.M.
Dinner: 8:00 P.M.

Speaker: J. Alfred Fabro, M.D., President, Litchfield County Medical Association

Middlesex, Thursday, April 13

COMMODORE MACDONOUGH INN, MIDDLETOWN

Business Meeting: 4:30 P.M.

Dinner: 6:30 P.M.

Speaker: Dr. Albert N. Jorgensen, President, University of Connecticut

Tolland, Tuesday, April 18

OLD HOMESTEAD INN, SOMERS

Speaker and Subject to be announced.

Dinner: 6:30

Windham, Thursday, April 20

Place of meeting to be announced.

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Editorials

Privileged Communications

In this issue of Connecticut Medicine is a special article entitled "Confidentiality." It is a plea for passage of legislation now before the General Assembly to give to communication between the doctor and patient the same protection from disclosure which is now granted to lawyers and clergymen.

The factual cases sited in this article are clear indications for the necessity of this legislation.

It is hoped that each doctor in the state will exert enough energy in the interests of his professional life to write or talk with his political representatives in the General Assembly and urge favorable action in this matter.

D. S. O'C.

U.S. Veterans And Hospital Care

A recent special Register report—on both the national and the Connecticut picture as regards hospital care by the Veterans Administration—will, we hope, promote wide local discussion.

The issue it presents is bound to be an important part of the medical care discussions coming up in Congress.

And the question of just how much the taxpayers of the United States must continue to contribute to the medical care of veterans—just because they are veterans—is one which must soon be faced by a nation committed to universal military conscription.

The Register has always supported the concept of the veteran as a citizen first and a special-interest applicant second.

We do not challenge the idea that our Veterans Administration Hospitals should be the best hospitals that money can buy. But we do believe that there must be some control on the way in which the VA hospitals are made available for the treatment of illnesses and accidents entirely unconnected with the military services.

The Veterans Administration will spend in 1961 more than $1 billion and $170 million dollars—which is a vast sum. The VA says that 66 per cent of the people it treats are veterans with non-service connected disabilities. Critics of the VA say that the figure is actually closer to 85 per cent.

In either case we are spending close to a billion dollars a year in behalf of medical care for which the government and the taxpayers of the United States have no direct responsibility.

The fact that veterans must now swear that they are unable to pay for medical care is not a full protection—apparently since many a veteran facing high hospital or doctor's bills finds it no problem at all to conclude that he can't afford to pay such bills.

The question is one that will provoke a predictable clamor from "professional" veterans. It is one that will draw an eloquent rebuttal from within the Veterans Administration itself.

But we are among those who feel that it can be best aired—and probably best solved—by a full-scale analysis and investigation in Congress. And we hope that both those who criticize and those who defend the status quo in veterans medicine will join in supporting such a study.—*An Editorial from the* New Haven Register.

Relationship Between Genes And Viruses

The most widely studied virus, the Tobacco Mosaic Virus is in the middle of the scale of virus size and is itself just somewhat larger than the average gene. There are thus viruses with molecular weights much smaller and also much larger than the average gene. Both the gene and the virus also have in common that they are nucleoproteins, that they reproduce only within specific cells and that they each possess the ability to mutate.

Generally viruses reproduce many times within a given cell while genes generally reproduce but once with each cell division. However, there are now known instances in which viruses like genes will reproduce but once with each cell division, while there are also instances in which genes will reproduce more than once in a cell division, a phenomenon known as polyploidy resulting from treatment with Colchicine. From this it would appear that there must be a close relationship between genes and viruses.

Two great discoveries have produced experimental evidence for an exceedingly intimate relationship between viruses and genes. In 1928 Griffith[2] succeeded in producing a virulent S type of pneumococcus organism from a non-virulent R type when he injected R type and heat killed S type into a mouse. Apparently the R type received something from the heat killed S type that altered its genic apparatus. A similar observation was made when an extract of an encapsulated pneumococcus was added to a culture of a non-encapsulated form. The latter then was converted into an encapsulated form. Something from the extract of the encapsulated pneumococcus was obviously transferred into the genetic apparatus of the non-encapsulated form. What was it, a virus or a gene? In 1944 Avery[3] showed it was a "transforming principle" now known as a molecule of deoxyribonucleic acid (D.N.A.), the basic structure of both a virus and a gene.

In 1952 this phenomenon was extensively studied by Zinder and Lederberg[4] who gave the name of Transduction to the phenomenon of introducing genetic material into a cell and thereby altering its genetic apparatus. They showed that genetic material could be carried from one type of Salmonella to another by means of a bacterial virus. This phenomenon of Transduction has now been shown to exist widely in the influenza bacterial system and in transferring drug resistance and other genetic factors, in converting serotype Eschericia 1 to Escherechia 2, in converting non-toxin forming cells into toxin forming cells. The remarkable fact seems to be that a dead virus can carry the genetic material into a living cell. The gene seems to ride within the bacterial virus. Thus it is clear that in Transduction a gene or a collection of them in the form of a chromosome fragment can be transferred from one kind of donor cell to another kind of receiver cell and be incorporated into the genetic apparatus of the receiver cell. In all this the transferring agent, the virus itself need not possess viral activity to accomplish Transduction because the virus can be killed by ultra violet light and still remain a carrier of a gene.

A bacterial virus under certain conditions does not multiply inside of a special cell, but like a gene divides but once with each cell division. In this way it persists in a concealed form or prophage. In this form it is non-pathogenic and non-infectious, going on from one generation until the next exactly as does a gene. Thus there are times when a bacterial virus may not exhibit its normally infectious nature but rather have its potentially unlimited reproductive capacity under genetic control replicating but once with each cell division.

On the other hand there are times when a specific genetic element of a cell can be freed of the normal controlling mechanisms of the cell and go forth in viable form in solution or in association with a virus, enter a different cell, replace a homolagous chromosomal segment and resume its original specific function in the new cell. Thus viruses can act as genes and genes as viruses under certain conditions. If a virus can enter a cell alter its genetic structure may it not also do this to produce cancer? If we think of such possibilities perhaps experiments will occur that can bring this idea to an experimental test.

L. H. N.

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Drug With A Bonus

On occasion in medical research, the interest may prove to be more important than the principal. A recent preliminary report in The Journal of the American Medical Association last June 4, since confirmed by a number of personal communications, describes a case in point.

A substance called griseofulvin, a mold in the penicillin family, was reported last year to be an effective systemic treatment for fungus diseases, the simplest and most common of which is athlete's foot. Its biological effect in the laboratory is similar to that of colchicine, which has been used successfully for years in the treatment of gout.

Because of this similarity, Dr. Abraham Cohen, Dr. Joel Goldman, Dr. Richard Daniels and Dr. William Kanenson, working in the Philadelphia General Hospital, decided to try the substance in treating patients with rheumatoid arthritis.

The response so far as the arthritis was concerned was negative. However, some of the patients who received the drug had a condition known as the shoulder-hand syndrome, and here the effect was little short of remarkable.

PAIN EXCRUCIATING

The syndrome is described medically as a reflex condition involving both the nerves and blood vessels of the shoulder and upper extremity. It is characterized by pain, tenderness, limitation of motion, swelling, stiffness and lack of mobility in the hand and fingers. It sometimes follows diseases of the blood vessels, herpes zoster (shingles) and stroke.

The syndrome is sometimes seen after a severe coronary artery occlusion. Often the cause cannot be determined.

When the condition is severe, the pain is excruciating. Sleep is impossible, and the patient is completely disabled.

After the first few cases of improvement with griseofulvin therapy were noted, a research method known as the "double blind" was used.

With this technique the pills look the same, but one of them is the real drug and the other is an inert substitute. Neither the patient nor the physician knows which is which.

Patients given the inert "placebo" showed no results. Patients on the griseofluvin usually had relief of their pain in less than a week; when the drug was discontinued and the placebo substituted, the pain returned.

Fortunately there are no reports in the literature of any toxic reactions to griseofulvin, and one series of dogs has been kept on ten times the human dosage for longer than a year with no evidence of ill effect.

This observation with griseofulvin parallels a similar experience with the niazid compounds, which are now used so successfully in the treatment of tuberculosis. It was noted originally that some patients who were severely depressed and who took these drugs for their tuberculosis also showed marked relief from their depression.

This observation opened a whole new field of research in the so-called psychic energizers and led to a new approach to the difficult emotional problems of depression and anxiety.

NO EXPLANATION YET

"We are unable to give a scientific explanation of our findings," the authors of the report on griseofulvin say. "The consistency with which the improvement occurs is indeed unusual."

Discoverers of penicillin, the sulfonamides, liver extract, the new anti-malarial drugs and scores of other newly discovered therapeutic agents were also unable to give definitive scientific explanations for their initial results. A further understanding of the action of these agents has come with additional research and experience.

Fungus infection is a far cry from bursitis and the shoulder-hand syndrome, but here is a new substance that apparently has a therapeutic effect in both conditions. As the authors of the original report suggest, "This is a preliminary report, made in the hope that others might use this method to either confirm or refute our findings."

The original observations are exciting, but now must be subjected to the most critical review. Whatever the final outcome, new fields of basic research have been opened into the whys and wherefores of this strange affinity.

By Howard A. Rusk, M.D., reprinted with permission of the author and of The New York Times.

Badge Of U. S. Failure

Many will welcome President Kennedy's Social Security health program as a mark of governmental progress. They will see an expression of this nation's concern for the well being of its people. They will expect this to make America a better place to live.

But if we are quite realistic, we shall regard this measure as a badge of failure. What it means is that the American government has been unable to provide the kind of social and economic climate in which young people themselves have the means and the will to provide, by insurance or otherwise, for the medical care they will need in their old age.

Mr. Kennedy has offered a modest program. He has steered away from involving physicians in anything resembling "socialized medicine." He has recognized that increasing the availability of hospital and nursing care will require more hospitals and more nurses.

If we must concede that the American economy is suffering from a nutritional deficiency, then this is a reasonable intravenous injection of glucose.

But no one ought to be happy about it.

For the injection contributes a little to the further invalidism of the economy.

The President's health plan will take $1.1 billion every year out of the income of workers and employers. This will be invested not in replacement of our aging industrial plants and machinery, but in government securities held by the Social Security Fund.

So far as free services are conferred on men and women able to pay for their own health care, many poor wage earners will have a little less and a few well-to-do old people will have more.

Psychologically the program will encourage many Americans to lean more heavily on the government. They will exert irresistible political pressure for extending the free health care program to physicians' and surgeons' fees, to laboratory fees, to all the costs of indefinitely extended illnesses.

An economy founded on self-reliance is moving toward an economy based on governmental benevolence.

There will be more and more to ask what their country will do for them—fewer and fewer to ask what they can do for their country.—*Editorial from the* Boston Herald, *February 12, 1961.*

THE PRESIDENT'S PAGE

On this occasion, my last opportunity to avail myself of the privilege accorded the President of the Society to set forth a message on this page, I offer to each member of the Society my sincere thanks for permitting me to serve as the 123rd President of this venerable organization. The honor of serving in this office for the past year is one for which I always shall be grateful.

It has not been an easy year for the Society nor for the medical profession in general. An avalanche of smears, castigations and ridicule has been heaped, and increasingly is being heaped, upon physicians and their professional associations. Distortions, half-truths and deliberate lies are being disseminated effectively and widely by propaganda experts and their dupes. By these means, and not by facts and demonstrated needs, the leash of government controls has already been tightened around the profession's neck and the profession is being pulled in the direction socialist schemers want it to go. Increasingly, the so-called "counter-proposals" of medical organizations seem to be simply shorter steps headed in the same direction as the socialist proposals. We seem to be resisting the pull of the leash only enough to walk instead of galloping toward socialized medicine.

The American medical profession currently is foremost in the development and application of improvements in preventive, constructive and curative medical knowledge. It has become a medical mecca eagerly sought by physicians all over the world. Its position of scientific and technical medical leadership is obvious even to casual observers. On the other hand, its artlessness in maintaining its equilibrium in today's political and economic environment threatens to make it increasingly analogous to a big dog on a leash, happy to amble in any direction its petty bureaucrat masters want to lead it and growling only when tugged into a rapid gallop.

Appeasement on the politico-economic front will not protect and promote the American medical profession's position of scientific leadership nor will it preserve the American system of freedom and individuality in the personal matter of medical care. In the President's Pages during the past year, I have suggested some topics wherein deeper study by the profession and wider dissemination to the public could help preserve the American medical system: stronger group action, improved self-discipline, augmented professional status (May '60); practical advantages of the fee-for-service system (June '60); bi-partite principle of "free choice" (July '60); averting "socialism through collective consumption" (Aug. '60); more medical educational facilities (Sept. '60); political action (Oct. '60); legislative action (Nov. '60); legislative follow-through (Dec. '60); broader voluntary insurance coverage (Jan. '61); adaptation to newer economic patterns (Feb. '61); and regular interval examinations of the Society's structure and functions (March '61).

As I step down from the presidency and also voluntarily bring to an end 10 consecutive years on the Society's Council, I am happy to report that our Society has come safely through the acute upset of three years ago and is emerging from its convalescence to greater strength and effectiveness than ever before. I am deeply grateful that I was accorded the opportunity to be of service.

John N. Gallivan, M.D.

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*
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Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

CALL

ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1961 Annual Meeting of the House of Delegates will be held in the auditorium of the Hamden High School, 2040 Dixwell Avenue, Hamden, commencing at 10:00 o'clock in the morning of Tuesday, April 25.

Following luncheon, the House will reconvene for the completion of business.

John N. Gallivan, President
Orvan W. Hess, Secretary
William R. Richards, General Manager

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4 of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the General Manager in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolutions and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

COUNCIL MEETINGS

Thursday, March 9, 1961 and Thursday, March 16, 1961

Two consecutive meetings of the Council were held respectively on March 9, 1961 and March 16, 1961. It was VOTED to hold the second meeting as a continuation of the first because of the length of the March 9th agenda and because several items of business considered at that meeting required further definition which was accomplished during the week intervening.

The meeting of March 9, 1961 was called to order by the Chairman at 3:00 P.M. In addition to Dr. Gilman, the following members were present: Drs. Gallivan, Goldberg, Hess, O'Connor, Caplan, Cullen, Gardner, Abbot, Bradley, Cornwell, Katzin, Buckley, Rentsch, Ogden, Gevalt, Grant, Davis, Phillips, Purnell. Also present: Dr. Richards, Mrs. Lindquist and Mr. Burch. Absent: Drs. Feeney, Scully, Weise, Sr., Murray, Jr., Schiavetti, Gorman, Chartier.

The meeting of March 16, 1961 was called to order by the Chairman at 2:00 P.M. In addition to Dr. Gilman, the following members were present: Drs. Gallivan, Feeney, Goldberg, Hess, O'Connor, Caplan, Cullen, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Buckley, Rentsch, Murray, Jr., Ogden, Grant, Davis. Also present: Dr. Richards, Mrs. Lindquist and Mr. Burch. Absent: Drs. Gardner, Katzin, Schiavetti, Gorman, Gevalt, Phillips, Purnell, Chartier.

MINUTES OF THE MEETING OF FEBRUARY 8, 1961. It was VOTED to approve the minutes of the February 8th meeting as printed.

CONNECTICUT DISTRICT BRANCH OF THE AMERICAN PSYCHIATRIC ASSOCIATION. It was VOTED *not* to grant a request of the Connecticut District Branch to use 160 St. Ronan Street, New Haven, as its official mailing address for purposes of incorporating, on the grounds that the organization is not a component part of the Connecticut State Medical Society.

DUES EXEMPTIONS. It was VOTED to exempt the following members from payment of dues for the period indicated:

Gordon J. Gilbert, New Haven County, 1961-1964.

Robert N. Hamburger, New Haven County, 1961-1963.

Pedro O. Bonadero, New Haven County, 1961.

Carl P. Viola, New Haven County, Permanent.

CONNECTICUT MEDICAL SERVICE, INC. At the March 9th meeting, the Chairman reported on the Joint Meeting of the CMS and CSMS Liaison Committees. He related that a progress report had been presented by the General Manager on the county associations' actions on the proposed CMS Community Contract, the recommendations of the Third Party Payments Committee, etc. He presented the names of physicians who had been jointly nominated to the CMS Medical Advisory Committee as follows:

For terms of three years:

* Francis Gallo, M.D.—General Practice—to succeed himself.

* Israel E. Blodinger, M.D.—Proctology—to replace Dr. Polito.

Louis D. Harris, M.D.—Ophthalmology—to succeed himself.

* Members of the CMS Board of Directors. It was pointed out that Cleveland R. Denton, M.D., a new member of the Board, had two years of his term remaining as an MAC member.

For terms of one year:

Allan J. Ryan, M.D.—Chairman of the Medical Advisory Committee.

Francis Gallo, M.D.—Vice-Chairman of the Medical Advisory Committee.

Several other matters discussed at the Joint Meeting of the Liaison Committees were taken up at a later point in the Council meeting.

The next order of business on March 9th was review of the actions taken thus far on the proposed CMS Community Contract. Reports were submitted by the eight County Councilors, supplemented by letters from the county secretaries. These reports showed that seven county associations had voted to approve the Contract in concept but had made approval of it contingent on the Board of Directors of CMS, Inc. complying with certain recommendations.

Insofar as the Committee on Third Party Payments is concerned, the Chairman of that Committee had filed a report with the General Manager which recommended approval of the Contract and also listed certain recommendations which should be dealt with jointly by representatives of CMS, Inc. and the Society. It was VOTED to accept this report and transmit it to the House of Delegates.

Reviewing these several reports, it was concluded that all steps listed in the "Method" adopted by the House of Delegates on April 28, 1959, had been completed up to Article VII which calls for action on a proposed contract by the House of Delegates, at a regular or special meeting. In view of the fact that the next regular meeting of the House is scheduled for April 25, 1961, it was VOTED to call a Special Meeting of the House of Delegates at 2:00 P.M. on Tuesday, March 28th at the Hunt Memorial Building in Hartford for the purpose of acting upon the proposed CMS Community Contract.

It was further VOTED to direct the Chairman to attempt to arrange a Joint Meeting of the Liaison Committees of CMS and CSMS for the purpose of reviewing all suggestions and recommendations embodied in the several reports described previously. At the Council meeting of March 16th, Dr. Gilman reported that such a Liaison Meeting had been set for March 22nd at the CMS Building.

It was further VOTED, on March 9th, to hold a meeting of the Council at 1:00 P.M. on March 28th at the Hunt Memorial Building in Hartford, at which time the Council will receive a report on the deliberations of the aforementioned CMS-CSMS Liaison Meeting and will draft its "Recommendations. . . . .with respect to such proposal (The Community Contract)," as called for in Article VIII, Section C, of the "Method."

A second important matter considered at the March 9th meeting consisted of three proposals concerning physician representation on the Board and the manner of their election. These proposals can be stated briefly as follows:

General Assembly House Bill No. 3610—which proposes that the subscribing members of CMS, Inc. elect at least three members of the Board of Directors.

A substitute for HB 3610, drafted by the Insurance Commissioner—which proposes that the Governor shall appoint one-third of the Directors, with the Society and the Board designating one-third each.

A memorandum to the CMS Board from the CMS Legal Counsel—which suggests possible consideration by the Board of amendments to the CMS Bylaws under which physician representation on the Board be reduced to 40 per cent and the Society *not* have the exclusive right to nominate the physician members of the Board, in order to comply with the Insurance Commissioner's demand to the Board that a majority of Directors be laymen.

There was uniform concern expressed by all members of the Council toward these three proposals and following full discussion of the problem confronting it, the Council VOTED unanimously to adopt a somewhat lengthy Resolution which said, in part:

"BE IT RESOLVED: That the Connecticut State Medical Society reaffirm its belief that Connecticut Medical Service, Inc., to which the Society has given sponsorship continuously since 1948 and in which a majority of its members have voluntarily participated, operates effectively in the public interest, and be it further

RESOLVED: That the Connecticut State Medical Society stand firm against the enactment of legislation by the Connecticut General Assembly or the amendment of CMS Bylaws by the Corporation which would change, in any way, the present composition of the Board of Directors of Connecticut Medical Service, Inc. or the present method of nominating and electing eight (8) lay and eight (8) physician Directors to the Board, . ."

In the preamble to the Resolution, the general original agreements under which the Society gave sponsorship to the Plan in 1948 were reviewed, and in several additional "Resolves," the Council incorporated certain opinions regarding possible consequences which might result in the event that the Society's representation on the Board were to be reduced percentage-wise or subjected to a revision in the method of nomination.

It was VOTED to transmit copies of this unanimously adopted Resolution to members of the CMS Board of Directors for their consideration. At the Council meeting of March 16th, the Council was pleased to receive the following communication from Mr. John Coolidge, President of CMS, Inc.:

"At this meeting (March 15, 1961) the Board adopted the following resolution: "That the Board hereby goes on record to affirm that in its opinion the Board as presently constituted operates effectively in the public interest."

Upon receiving this action of the Board, and finding it completely in keeping with its own resolution outlined above, the Council VOTED to direct the Chairman to communicate to the President of CMS, Inc. an expression of commendation to the Board of Directors from the Council, indicating unanimous approval of the Board's decision in this important matter. Although the Council had previously voted to distribute copies of its Resolution to other individuals and agencies, on March 16th it was VOTED to rescind the several actions pertinent to such distributions.

On the same subject, the President, Dr. Cullen and the General Manager reported on the events which transpired at the hearing on House Bill No. 3610, which was held before the Joint Insurance Committee of the General Assembly on Tuesday, March 14, 1961. The reports indicated that almost everyone who testified gave firm support to the contention that both Blue Cross and Blue Shield in Connecticut are operated most effectively in the interest of the public, and that only Mr. Wagner of the Insurance Commissioner's Office had introduced a discordant note of controversy into the proceedings. Although several representatives of organized labor spoke in favor of HB No. 3610, Mr. Wagner spoke neither for nor against it but confined himself to a "statement" in which he recounted a number of past and present grievances he and the Commissioner hold against "the doctors" and the State Medical Society.

Most of Mr. Wagner's charges appeared to be largely unjustified, so far as the Society's representatives were concerned, but Dr. Gallivan pointed out to the Council that Resolution No. 5 adopted by the House of Delegates on January 27, 1960, had been publicly interpreted by the Insurance Department's spokesman in a manner which appeared damaging to the Society in that it was used by Mr. Wagner to support his charge that the Society has a "stranglehold" over CMS and its proposed contracts.

For this reason, at the March 16th Council meeting, Dr. Gallivan moved the adoption of the following Resolutions:

WHEREAS: The Society's House of Delegates assembled in a special meeting on January 27, 1960 re-examined certain principles it had been following as regards CMS and after lengthy debate reached conclusions which were generally acceptable although not entirely to each delegate's individual taste in every detail, and

WHEREAS: The reaching of these conclusions did in fact put an end to the intra-Society controversy with respect to the basis of determining the level of service benefits coverage, and

WHEREAS: The House of Delegates, obviously in the belief that general agreement had been reached in the major areas where differences of opinion had existed among Society members, strongly urged all doctors of medicine in Connecticut to support the service benefits principle, recommended that CMS seek to make available to all CMS members broader coverage and more comprehensive protection, and in a portion of so-called Resolution No. 5 expressed the opinion that the Society's representatives on the CMS Board of Directors and the CMS Medical Advisory Committee should feel morally obligated to observe and further the intent of these particular conclusions on which the House of Delegates had that day reached and expressed general agreement, and

WHEREAS: Said portion of so-called Resolution No. 5 has been widely misinterpreted by non-physicians and by some physicians as a strangle hold on physician members of CMS boards or committees instead of being interpreted correctly as a simple statement of opinion which could be paraphrased as "Now that the members of the Society have settled matters previously in dispute and have reached general agreement on basic matters involving CMS, the Society believes that its representatives on CMS boards and committees should translate the statements that revolved in this general agreement into harmonious actions for the benefit of all CMS members," and

WHEREAS: Said misinterpretations are harming the Society and hampering the Society's representatives on CMS boards and committees rather than helping them, as intended, to translate into actions the conclusions and recommendations which were found generally acceptable to the House of Delegates on January 27, 1960, therefore be it

RESOLVED: That the Council recommend to the House of Delegates at the 1961 Annual Meeting that the House of Delegates rescind Resolution No. 5—Re: Official Notification of Actions of the January 27, 1960 Special Meeting of the House of Delegates.

It was VOTED to adopt this Resolution and, as indicated in its wording, transmit it to the House of Delegates for action at the Annual Meeting in April, 1961.

It was also VOTED to transmit to a Joint Meeting of the CMS-CSMS Liaison Committees as a proposal of the Council, a suggestion of the Connecticut Society of American Board Surgeons that consideration be given by CMS, Inc. to the possible inclusion, under CMS Subscriber Contracts, all dependents of the Subscriber who are claimed as dependents for Income Tax purposes. It is understood that any proposal which might subsequently be offered by CMS to accomplish such inclusion would be submitted to the Committee on Third Party Payments for study and report.

BLUE CROSS FOR THE SOCIETY'S EMPLOYEES. It was VOTED to authorize the purchase of the new Blue Cross "Extended Plan" for qualified members of the office staff.

COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. It was VOTED that the Connecticut State Medical Society *not* participate in the operation of the New England Postgraduate Assembly this year. The New England Council will operate the Assembly in 1961 for the first time. It is anticipated that M. David Deren, Chairman of the New England Council's Committee on Medical Economics and Insurance will soon present a report to the Society's Council on the progress being made toward the formation of a New England Physicians' Investment Corporation under the auspices of the N. E. Council.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to appoint James C. Niederman, New Haven, to membership on this Committee, replacing Robert H. Green, New Haven, resigned.

It was VOTED to table action on several recommendations from the Committee having to do with Regional Health Centers and the operation of "Health Teams" by the State Department of Health. Dr. Foote is to be requested to provide the Council with further information on these projects.

COMMITTEE ON RURAL HEALTH. It was VOTED to authorize reimbursement of Gaert S. Gudernatch, Chairman of the Committee, in the amount of $134.44 for expenses he incurred in attending the Conference on Rural Health held in Chicago on February 3-4, 1961. The reimbursement is to be made out of the contingency fund.

NATIONAL MEDICAL POLITICAL ACTION COMMITTEE. It was VOTED to inform the AMA Legislative Council that the CSMS Council approves in principle the formation of a National Medical Political Action Committee.

SECTION ON EYE, EAR, NOSE AND THROAT. It was VOTED to approve a recommendation of the EENT Section that the Section's endorsement of an AMA House of Delegates Resolution on contact lenses, adopted by the AMA House on June 16, 1960, be transmitted to the American Medical Association as information.

AMA REGIONAL CONFERENCE ON VOLUNTARY HEALTH INSURANCE. Notice that this Conference will be held in Boston, Mass. on March 24-25, 1961 was received by the Council, and it was VOTED to request members of the Council to inform their county associates of the meeting and the General Manager to notify members of the Medical Advisory Committee and Board of Directors of CMS, Inc.

REPORT OF THE NOMINATING COMMITTEE. With the President presiding, the Chairman presented the report of the Nominating Committee for 1961-62.

It was voted to accept the Nominating Committee's Report on nominations for Committees to be elected by the House of Delegates and Committees elected by the Council for transmittal to the House of Delegates at the Annual Meeting on April 25, 1961.

In considering the Nominating Committee's Report on its nominations for officers, Dr. Gilman requested that the Council give its "advice and counsel" by voting on each nomination separately and by written ballot, with the vote on each candidate to be reported and recorded.

The Nominations for Officers for 1961-62 are as follows:

For President-elect—Clyde L. Deming, New Haven.

For 1st Vice-president—John D. Booth, Danbury.

For 2nd Vice-president—Walter Weissenborn, Hartford.

For Treasurer—Isadore S. Goldberg, Torrington.

For Secretary—Orvan W. Hess, New Haven.

For Managing Editor of the Journal—Denis S. O'Connor, New Haven.

For Literary Editor of the Journal—Louis H. Nahum, New Haven.

For AMA Delegate—Norman H. Gardner, East Hampton.

For Alternate AMA Delegate—Vincent A. Gorman, Bridgeport.

For Councilor-at-large—Ralph T. Ogden, Hartford.

For Speaker of the House—Michael R. Scully, Bridgeport.

For Vice-speaker of the House—Clifford W. Wilson, Norwich.

It was VOTED to keep the reported vote on each nomination on file at the Society's headquarters and that this slate be transmitted to the House of Delegates.

STATE MEDICAL SCHOLARSHIPS. Concerning the endorsement of state medical scholarships and other liaison matters relating to the Connecticut Chapter of the American Academy of General Practice, it was VOTED to invite the President of the AAGP in Connecticut to attend the April meeting of the Council for the purpose of discussing these matters.

SECTION ON RADIOLOGY-WORKMEN'S COMPENSATION COMMISSION AGREEMENT. Despite several communications from the Chairman of the Compensation Commission, the matter of payment in compensation cases to non-roentgenologists remains in doubt. Since Dr. Coleman Lopatin of Bridgeport has petitioned the Council on several occasions to take action leading to some final resolution of this situation, it was VOTED to request Dr. Lopatin to ask for a hearing with his local Compensation Commissioner on a specific contested payment, and to inform Dr. Lopatin that in the event the Commissioner rules he is empowered to determine fees for an item of X-ray service which differ as between specialist and non-specialist, the Council will authorize Dr. Lopatin to consult the Society's legal counsel for the purpose of determining his legal rights in this regard.

MEDIC-ALERT FOUNDATION. It was VOTED to refer a package of materials on Medic-Alert, a medical name tag or bracelet (i.e., "Allergic to Penicillin," "Blood Group O") program to the Committee on Public Relations for study and report to the Council.

REGIONAL STUDY ON PREVENTION OF DISABILITY. It was VOTED to direct the Chairman to request two representatives of the Society to attend a Regional Conference on this subject, after consultation with the Chairman of the Committee on Rehabilitation. The Conference was scheduled to be held in Providence, R. I. on April 12th and 13th, but it has been learned subsequently that it has been postponed until the Fall.

AMA CONFERENCE ON HR 4222, 87TH CONGRESS. A conference on HR 4222, the Society Security health bill for the aged is to be held in Chicago on March 18th and 19th. In response to a request from the AMA Legislative Council, it was VOTED to designate Drs. Gallivan, Feeney and Weise, Sr. as the Society's three representatives. By mutual agreement, Clifford W. Mills, Norwalk, will attend the Conference in Dr. Gallivan's place.

PHYSICIAN-HOSPITAL DISAGREEMENT. Dr. Gallivan reported on the results of his informal investigation of the circumstances surrounding withdrawal of surgical privileges from a member of the Society by the Executive Staff Committee and/or Board of Trustees of a general hospital. Having determined, through correspondence, that the member had been granted no hearing in the matter, Dr. Gallivan recommended that such a hearing be sought again. It was therefore VOTED that the General Manager draft and send an appropriate letter to the Secretary of the Executive Committee of the Medical Staff of the hospital concerned, conveying a recommendation from the Council to the Executive Committee that the member be granted a hearing on the subject of withdrawal of his privileges, in accordance with the principles recommended by the Joint Commission on Accreditation of Hospitals. A copy of this letter is to be sent to the physician concerned.

OPINION SURVEY. Dr. Gardner, Chairman of the Subcommittee on Opinion Survey, announced that the analytical and statistical work on the Survey is nearly completed and that final reports are expected to be received from Rogers, Slade and Hill in the near future. It was VOTED to complete final payment to Rogers, Slade and Hill on receipt of the final reports. It is planned to publish the results of the Survey in CONNECTICUT MEDICINE, using such a format as will provide the membership with easily assimilable facts and figures.

RELATIVE VALUE STUDY. Dr. Benjamin D. Thaw, Chairman of the Committee on Relative Value Study, submitted a report for his Committee which informed the Council that the nomenclature for the Study has been completed and is ready for coding and setting up in questionnaire form. It was VOTED to authorize Dr. Thaw and the members of his Committee to initiate exploratory meetings with representatives of Rogers, Slade and Hill for the purposes of obtaining advice as to coding, questionnaire format, cost estimates, etc. pertinent to conducting the Relative Value Study, and to direct Dr. Thaw to report back to the Council when these exploratory meetings have been completed.

COMMITTEE ON MEDICAL ECONOMICS AND INSURANCE. Dr. M. David Deren, Chairman, submitted a Special Report of the Committee on Medical Economics and Insurance which deals with the subject of multiple programs of Health and Accident and Major Medical Insurance now being made available to members through the Society and several of the constituent county medical associations. It was VOTED to accept the Special Report of the Committee and publish it in CONNECTICUT MEDICINE and send informational copies to the presidents and secretaries of the county medical associations.

WNHC (NEW HAVEN) RADIO PROGRAM "CONTROVERSY." The Council received an invitation from Mr. David Goldman, Chairman of the Public Relations Committee of the Connecticut Bar Association, to have representatives of the Society participate in debate-type discussions of one-half hour each to be taped for presentation on a regular Sunday evening WNHC radio program titled: Controversy. The subjects selected by Mr. Goldman are (1) Socialized Medicine and (2) Health Care of the Aged. The programs are sponsored jointly by WNHC and the Connecticut Bar Association. It was VOTED to accept this invitation but that certain safeguards would have to be guaranteed by the sponsors that the taped discussions could be reviewed and the programs presented would be the same as the ones finally approved after review. The Chairman, the Councilor-at-large and the General Manager were authorized to select two suitable participants for these discussions.

HOUSE JOINT RESOLUTION NO. 45, 1961 GENERAL ASSEMBLY. House Joint Resolution No. 45: "Memorializing Congress to Enact Legislation on Medical Care for the Aged through Social Security," will undoubtedly be heard by a Committee of the General Assembly at about the same time the 87th Congress begins to hold hearings on the King Bill, HR 4222. It was VOTED to request the President, the President-elect and the Councilor-at-large to prepare a statement or statements in opposition to this Resolution and to represent the Society at Hartford when House Joint Resolution No. 45 is heard.

AMA EAST COAST ADVISORY COMMITTEE ON MOTION PICTURES, RADIO AND TV. Officials of the Medical Society of the State of New York have requested that three representatives of CSMS join with theirs in serving with the AMA East Coast Advisory Committee on Motion Pictures, Radio and Television. The Committee would check scripts and other written materials for medical accuracy, give technical assistance on production problems, and speak on medical subjects to various lay audiences. It was VOTED that the Society have three representatives on this Advisory Committee and that all members of the Council be asked to submit the names of their choices to the Chairman or the General Manager.

COMMITTEE ON HEALTH CAREERS. It was VOTED to accept the resignation of Daniel A. LoPresti, Hartford, as a member of this Committee and to request the Councilor from Hartford County Medical Association to recommend a replacement.

CONFERENCE OF PRESIDENTS AND OTHER MEDICAL ASSOCIATION OFFICERS. It was VOTED to authorize payment of annual dues in the amount of $75 to the Conference of Presidents and Other Officers of State Medical Associations.

LETTER OF COMPLAINT RE WELFARE BENEFICIARIES. Dr. Corwell reported to the Council on a "Letter to the Editor" appearing in the Hartford Times of January 26, 1961, in which a complaint was voiced by the writer that certain welfare beneficiaries are unable to obtain medical assistance. It was VOTED to refer the complaint embodied in this letter to the Advisory Committee to the Commissioners of Welfare, Finance and Control for investigation, and to direct the Advisory Committee to report its findings and recommendations in this matter to the Council.

OPERATION JAYCEE DOCTOR. In a letter from the Secretary of the Joint Conference Committee with the Connecticut Pharmaceutical Association, it was brought to the attention of the Council that Commissioner Frassinelli of the Department of Consumer Protection had advised the Conference group that it is illegal for unlicensed non-professionals to pick up, hold in possession or distribute prescription legend drugs as is being done under the Jaycee Doctor operation. The General Manager was directed to seek an official ruling from the Commissioner and, if it is indeed illegal to operate such a drug collection plan, to notify the Woman's Auxiliary to this effect, since its members are participating in the program.

DATE OF NEXT MEETING. The Council will meet at 1:00 P.M. on Tuesday, March 28, 1961, immediately preceding the Special Meeting of the House of Delegates called to act upon the proposed CMS Community Contract.

PLACEMENT OPPORTUNITIES

The Society's Placement Service is in receipt of the following:

WANTED: General practitioner in the Litchfield area.

FOR SALE: Well established active general practice, modest price, easy terms, well equipped. Available immediately, excellent hospital.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

WANTED: TWO PHYSICIAN VACANCIES—Connecticut State Department of Health. (1.) To be in charge of program for coordinated medical and social care for illegitimately pregnant mothers and babies born out of wedlock. (2.) Supervision of well-child conferences, services for testing the hearing and vision of preschool children and many other stimulating programs for children. Requires completion of general internship in A.M.A. approved hospital and not less than two years' employment in practice of pediatrics or obstetrics, or two-year approved internship and M.P.H. degree. Merit system, liberal fringe benefits. Reply to B. Dearington, State Department of Health, State Office Building, Hartford, Connecticut.

1961 Meetings

April 12—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

April 19—Symposium on Pediatric Virology Hospital of St. Raphael, New Haven.

April 19—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

April 20—Annual Medical Symposium for Stamford-Darien-New Canaan Heart Association, Inc., at St. Joseph's Hospital, Stamford.

April 25, 26, 27—Annual Meeting, Connecticut State Medical Society, Hamden High School, Hamden.

April 26—Medical-Dental Orientation Course For the Chronically Ill and Aging, Forrest Hills Guest Home, 462 Derby Ave., New Haven.

May 3—Medical-Dental Orientation Course For the Chronically Ill and Aging, Hawkins Convalescent Hosp., 588 Ocean Ave., West Haven.

May 10—Medical-Dental Orientation Course For the Chronically Ill and Aging, Masonic Home for The Aged, Wallingford.

June 26-30—Annual Meeting, American Medical Association, New York City.

October 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30—Clinical Meeting, American Medical Association, Denver.

Special Article

CONFIDENTIALITY

William B. Terhune, *New Canaan, Conn.*

The State of Connecticut has no provision to safeguard the confidentiality of the patient-physician relationship. Medical records are subject to subpoena; a physician can be compelled to testify about any and all communications between himself and his patient. It is the responsibility of the physicians in this State to make every effort to correct this serious situation by supporting legislation now being considered.

Thirty-six States now provide patient-physician confidentiality. Most people assume that their confidences are absolute when they consult a doctor. If they knew that all revelations, every finding and medical conjecture, could be brought into court and made accessible to the public through the press, they would be amazed and many would hesitate to seek medical assistance. Lawyers and ministers of the Gospel are provided such confidentiality and medical findings are often of a more intimate nature. The absence of legal provisions for priviledged communications between patient and doctor militates against the patient and places the physician in an unenviable position. Individuals entirely unaware that they are involved, can be injured, perhaps irreparably, if medical records become public property.

For example: an unmarried girl who had been pregnant prior to marriage—20 years later her husband threatened to use this against his wife to coerce her and her family into doing as he wished by threatening to divulge this fact in Court as part of a divorce proceeding. He subpoenaed the record of her psychiatrist to prove his point and exposed all details.

A woman who knew that her husband had been a psychiatric patient 18 years ago, four years before she married him, brought his record into Court to prove his teen-age indiscretions. She was suing another woman for $500,000.00 for alienation of affections and wished to use this medical record as a lever.

It would be embarrassing and harmful and unnecessary to have the world know that one has an undescended testes; had broken an arm while drinking; or suffered from a socially unacceptable disease.

There are many facets to this problem. For example: a Conservator was appointed by the Court for a senile man. The examining physician testified, as part of evidence of irresponsibility, that the patient was afraid of his chauffeur and had paid him over $33,000.00 within the past six months. This was offered as an indication that the patient was incapable of handling his own limited financial affairs. This, along with other information, was of direct importance to the Court—but *all* the medical history relating to this patient was subpoenaed by the chauffeur. These private communications involved, and unnecessarily embarrassed, other members of the patient's family and were utterly irrelevant to the execution of justice in this case.

Physicians keep notes on their interpretations of information disclosed by a patient. This is an important part of a clinical record and a guide to the further study of that patient. For example, a record might contain a statement to the effect "it would seem that this man is projecting, evidence of paranoid tendency; perhaps he is schizophrenic." If subjected to subpoena, this conjecture could be used against the patient.

One could continue to cite endless examples of violation of the doctor-patient confidences and each physician can easily add additional possibilities.

Physicians treat not only organic disease, but they are the repositories of the patient's innermost personal feelings and actions, which encompass the tragedies of mankind. This ventilation affords the patient relief from repressed and dangerous emotional tension and the doctor is in a position to comfort, to strengthen and guide his patient.

A factor of no small importance is that some physicians now hesitate to keep accurate and complete records and this at a time when the profession is working toward better medical records to facilitate research and improve treatment. The situation forces the doctor to resort to all kinds of tricks—separation of records, code words not understood by the layman or lawyer. During the war, service medical records were open to the public and because of the possibility of lawsuits for libel, there were code words for the categories of mental illness—schizophrenia, psychoneurosis, paranoia, feeble mindedness, etc. These symbols were widely used by civilian physicians examining for the Selective Service. This protected the draftee, the Service, and the examining doctor. Needless to say, such medical records are inaccurate and misleading. I have recently corresponded with doctors practicing medicine in States without privileged communication and some of these doctors have told me of ruses which they are using to protect the patient. A number of doctors have been jailed for contempt of court by refusing to honor a court order to reveal personal information about a patient when such information had no relevance to the case.

There is before the Connecticut Legislature two bills: Bill No. 720 introduced by Senator Finney entitled, An Act Concerning Privileged Communications Between Psychiatrist and Patient, and, Bill No. 826 introduced by Senator Farmer entitled, An Act Concerning Communication Between Psychiatrist and Patient.

These Bills provide for privileged communication to give both patient and physician the freedom and security necessary to develop the close relationship essential for effective treatment.

It is hoped that every physician will write or telephone his representatives in the Legislature and ask their immediate consideration of these proposed acts. This is an urgent matter.

Doctors, as a group, are renowned as good citizens and for upholding the law. It is now time for the law to uphold medical ideals. The Legislators of Connecticut are fair minded people and it seems reasonable to assume that they will be anxious to correct this situation as soon as possible.

Bone Marrow Graft Survival

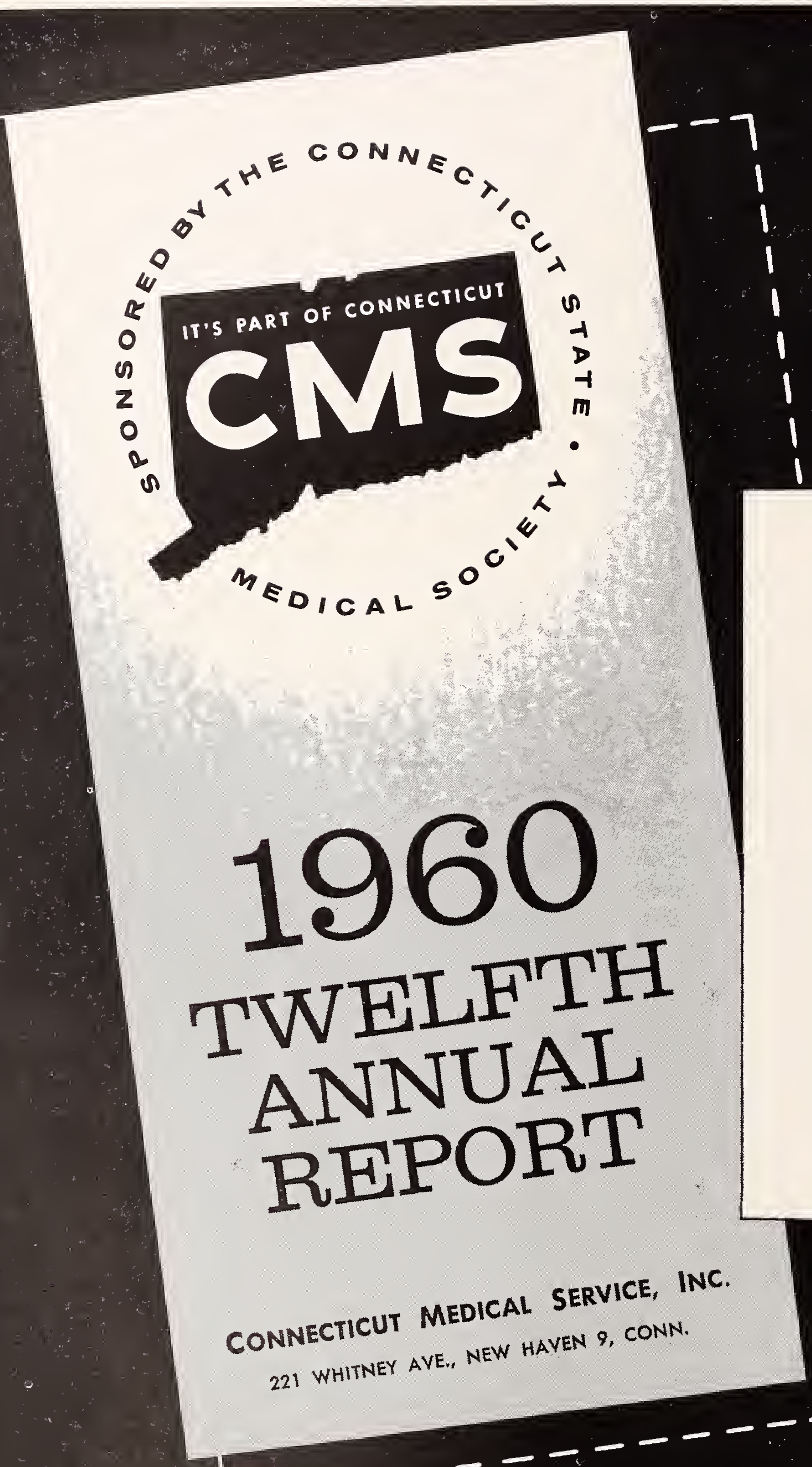
Bone marrow therapy after radiation injury appears to be justified in carefully selected cases. In two patients in whom the hematopoietic tissue was not completely destroyed and partially replaced by bone-marrow graft, there was "prolonged if not permanent arrest of a generalized malignant process."

In the well-known cases of six Yugoslav laboratory workers, five of whom were considered to have received lethal doses of radiation, bone-marrow treatment was quickly instituted at the Hôpital Curie in Paris, where they had been flown.

The French workers attempted "the grafting of haemopoietic tissue by the transfusion of nucleated cells derived from the liver and spleen of a premature infant which had died soon after birth." The danger of homograft disease makes it desirable to develop therapy with fetal hematopoietic cells in suitable cases—unless it is possible to use the patient's own preserved cells.

In the four surviving Belgrade workers there was a rapid rise in the granulocyte and thrombocyte counts following the transfusion, suggesting that "myeloblasts and megakaryocytes also established themselves in the patient's marrow. . . ." Apparently the marrow grafts became established, helped recovery, and may have saved the patients' lives; ". . . but after three months [they] had almost if not completely ceased to function."

In man it is still not possible completely to destroy and then replace hematopoietic tissue. Such destruction may mean irreversible damage to other tissues, making survival impossible. But work has gone beyond autografts, and the further immunologic study of the use of adult and fetal homografts should help in getting a better understanding of grafts generally. *(Brit. M. J. 1:1189, April 16, 1960.)*



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ANNUAL MEETING — APRIL 26, 1961

WOMAN'S AUXILIARY TO CONNECTICUT STATE MEDICAL SOCIETY
Race Brook Country Club, Orange, Connecticut

Speaker: Aubrey D. Gates, Director, Field Service, American Medical Association
Subject: "Who Should Prescribe for The ILL"

Auxiliary Annual County Meeting Dates

March 23—New Haven County
April 11—New London County
April 12—Hartford County
April 17—Middlesex County
April 18—Fairfield County
April 20—Windham County

Art Exhibit

Members of the Connecticut State Medical Society, their wives and children will be given an opportunity to exhibit their works of Art at the Hamden High School, 2040 Dixwell Avenue, Hamden, Connecticut, on April 25, 26, and 27, 1961 inclusive.

Works eligible: Oil, Watercolor, Tempera, Black and White, Sculpture, and Ceramics, Photography and Etchings, Pastel. All work should be original, no copies.

There will be four groups: (1) Children up to 16 years of age—over 16 will be judged with adults. (2) Beginners up to three years. (3) Advanced—over three years. (4) Professionals.

Jury: Works will be judged by professional artists whose names are to be announced.

Information: For more detailed information and entry blanks please contact Mrs. Ernest Rosenthal, 17 Pine Road, West Hartford 7, Conn.

Special Auxiliary Subscription Rate For The AMA News

The Board of Trustees of the AMA has approved a special price of $1.50 per year, which is 50 per cent of the regular rate, for the AMA NEWS to be sent to the home address of members of the Woman's Auxiliary, as well as all wives and mothers of physicians.

The copy being addressed to the physician cannot be transferred to the wife or mother, as the copy mailed to the physician must be sent to the professional mailing address, as it is the address control for the master list of physicians maintained by the AMA.

Therefore, the subscription must be ordered by the individual auxiliary member and must be mailed to the home address.

A special subscription order blank for the Woman's Auxiliary has been prepared and is available in quantity to each local auxiliary.

1961 Annual Meeting

The 38th annual meeting of the Woman's Auxiliary to the American Medical Association will be held in New York, June 26 to 29, 1961. Headquarters will be at the Hotel Roosevelt. Mrs. Harry F. Pohlmann will be chairman of the local committee on arrangements, with Mrs. John L. Neubert, co-chairman.

The House of Delegates meeting will open on Monday, June 26, at nine o'clock and continue through Thursday, June 29, with free time planned for visiting the AMA exhibits and other activities. Registration will start on Sunday and end Wednesday noon.

A tea and fashion show, honoring Mrs. William Mackersie and Mrs. Harlan English, will be held Monday afternoon. The annual luncheon, honoring the national past presidents, is planned for Tuesday. Invited guests will be officers of the American Medical Association and their wives.

Election of the 1962 nominating committee will be on Monday afternoon with the nominations Monday morning.

On Thursday discussion groups and committee program planning for 1961-62 will be presented, following which Dr. Ernest B. Howard, assistant executive vice president of the American Medical Association, will report on happenings in the AMA House of Delegates.

Details of the convention program and other activities will appear in the March 1961 Bulletin.

Rehabilitation Committee

At a recent meeting of the Council of The State Medical Society, a Committe on Rehabilitation was appointed. This is in line with a similar action accomplished in December, 1958 by the American Medical Association which has urged State Medical Societies throughout the Country to set up such committees. The purpose of these committees is stated to be to assist in the provision of better services to the public through assistance to physicians in the provision of information relative to local existing rehabilitation facilities and to assist in the coordination of interested groups in solving more of the problems of the disabled and handicapped than has been generally accomplished.

This seems to be a logical step since the number of disabled and handicapped people is increasing and there would seem to be need on the part of the medical profession to take a more serious and broader look and to develop a greater awareness of the value of rehabilitation facilities and services. It is further felt that the medical profession should take definite leadership in the field of rehabilitation to a much greater degree than is generally present since all planning in this field is based directly on the medical status of the individual patient involved. In some instances the existing rehabilitation services have been developed in spite of rather than through the assistance of medical personnel.

Rehabilitation is the development of an individual to his greatest degree of activity which is possible consistent with the impairment which may be residual from injury or disease. It has been further defined as the redevelopment of the patient to the "hilt of his capacity." Phrasing it another way, rehabilitation services provide comprehensive care based upon the following: (1) medical and surgical diagnosis and treatment that must continue beyond the "acute stage" of disease or injury to the point where the patient has reached maximum reduction of physical or mental disability. (2) Social Service for the purpose of assisting in planning, procurement of means financially, coordination of family activities and assistance in covering the many and varied social problems which occur in catestrophic illness or injury. (3) Vocational training and counselling which through selection of a suitable objective furnishes the means for eventual re-entry into the field of employment. (4) Job placement is "the payoff" for all of the previous efforts in providing employment for the given patient through selective placement.

The medical profession should take a direct interest in local rehabilitation programs since it is the individual physician's responsibility to see that his patient receives the rehabilitation service needed and to direct him to the facilities available for this purpose. He should also continue with an active interest and assistance throughout this retraining period.

To this end The State Medical Society has appointed a Rehabilitation Committee which will attempt to be of assistance in this direction and very possibly in other directions related to these problems as the needs become apparent.

Doctor's Office

Marvin I. Fox, M.D., announces the removal of his office from 75 New Haven Avenue to 2070 Bridgeport Avenue, Milford.

John M. Hill, M.D., announces the opening of an office for the practice of internal medicine and cardiology at 137 Jefferson Street, Hartford.

John J. Houlihan, M.D., announces the removal of his office from 271 Farmington Avenue to 51 Jerome Avenue, Bloomfield.

Paul C. Mastrony, M.D., announces the opening of an office for the practice of general medicine at 2156 Park Avenue, Bridgeport.

J. H. Ohanesian, M.D., who maintains a practice in New Britain, announces the opening of an office for the practice of obstetrics and gynecology at 120 West Main Street, Plainville.

William E. Sherpick, M.D., announces the opening of an office for the practice of obstetrics and gynecology at 58 East Main Street, Plainville.

John E. Sutton, M.D., announces the removal of his office from Woodruff House to Washington Green, Washington.

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One characteristic of Pro-Banthīne which has won it general medical acceptance is its versatility. Pro-Banthīne has proved highly useful in the management of gastrointestinal disorders varying widely in both symptoms and severity.

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Pro-Banthīne, brand of propantheline bromide, is supplied in tablets of 15 mg. for oral administration in conditions such as peptic ulcer, gastritis, duodenitis, pylorospasm, biliary dyskinesia and spastic colon, and in ampuls of 30 mg. for intramuscular or intravenous administration in conditions such as ureteral spasm and pancreatitis in which prompt and vigorous effects are required or when nausea and vomiting preclude oral administration.

Usual adult dosage: One tablet four times daily. Up to four tablets may be administered four times daily for severe manifestations.

When emotional factors prevail —
PRO-BANTHĪNE® with DARTAL®
Brand of propantheline bromide with thiopropazate dihydrochloride
(Not more than four tablets daily.)
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PRO-BANTHĪNE® with Phenobarbital

[1] Krantz, J. C., Jr., and Carr, C. J.: The Pharmacologic Principles of Medical Practice, Baltimore, The Williams & Wilkins Company, 1958, p. 843.

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Letters To The Editor

January 9, 1961

To The Editor of Connecticut Medicine:

The Connecticut Chapter of the Academy of Pediatrics Handicapped Child Committee has, after several meetings, felt that there are two important areas in dealing with handicapped children in which there is a need for emphasis.

I. The practising physicians of Connecticut need to be informed about the excellent facilities in this state for diagnosis and treatment of handicapping problems.

II. There is a need for a new philosophy, a better understanding of the social handicap of a "handicap."

The child who cannot run and jump and fight and compete on an equal basis with other children, is handicapped, whatever the cause. He is thus a "different" child and presumably always will be. Because of his presence, his family is made "different," and it is expected that he will become a "different" adult. Yet this is his world, and he must learn to live in it, and adjust to it, that he may make his contribution to it great or small. To become an effective adult, he should have every opportunity to live and study and play among those without handicaps. To set him apart makes him a stranger, and handicaps him further. To prolong his stay in a hospital deprives him of the needed experiences that rivalries and love of siblings, parents and friends afford.

It is therefore, the first aim of the Committee on the Handicapped Child of the Connecticut Chapter of the Academy of Pediatrics, to inform those who care for these children that there is this needed awareness of the importance of integrating them into society. To do this, a list of diagnostic and treatment centers has been compiled and included here, that a program may be established, the child's doctor acting as coordinator of the program with the family and the hospital or clinic. The ultimate aim is to return him to his family as expediently as possible.

Our second aim is to reach the medical schools and interne training programs in an effort to see that incorporated in their courses of instruction, is this philosophy of the handicapped child as a member of society, and not one set apart. The physician, during his early training should have time allotted in a teaching environment exposing him to these problems, that he may really experience the psychological and social difficulties met by the family, the problems of diagnosis and treatment. Thus, the doctors themselves will become more adequate, resourceful and understanding in helping both the child and his family.

Our third aim in the State of Connecticut, is to find a way to also familiarize the educators, that our school principals and out teachers may accept the challenge that we wish to offer, that of taking just as many handicapped children into our public and private schools as possible. There are some areas in the state, notably West Hartford, where this is being done already. Again, we would suggest an exchange program that in some manner, the teachers of Connecticut may have the opportunity to see and work with these children in our institutions, until they, too, begin to feel secure and see this need for incorporating the children into a normal social environment. We know there are teachers who are now obtaining special training for special types of handicapping situations. But this specialization needs broadening, and our boards of education and school building committees need to become familiar with this newer attitude, that they may look for this training in our teachers, and that space be provided in the schools for the children.

Lastly, these trends in thinking need interpretation. It is the responsibility of the doctor to his community to give guidance to these families, to aid the school administrators whenever he can be of service in planning with them the acceptance of the handicapped child. When society grows up with the handicapped, it will no longer need to be begged to employ them, and then we will have moved, at least a little way for them, toward making it "the best of all possible worlds."

Major Facilities in Connecticut for the Care of the Handicapped Child

State Department of Health, Hartford.

A. Crippled Children's Section, George L. Hamilton, Jr., M.D., Chief. JA 7-6341, ext. 2580.
   Clinics, *monthly,* in Putnam, Willimantic, Norwich, Torrington, Danbury, Derby, Stamford.

These clinics provide pediatric, orthopedic, public health nursing and medical social service in one place. Other services can be arranged and provided elsewhere.

Newington Hospital for Crippled Children

Newington MO 6-2461

This Hospital provides in-patient facilities for diagnosis and treatment, plus accredited schooling through high school. There is a broadened concept of handicapping conditions extended beyond the usual orthopedic problems to include chronic disease in children i.e. rheumatic fever, rheumatoid arthritis, asthma, nephritis, hematological disorders, encephalitis, poliomyelitis, lipoid disorders, bronchiectasis etc.

Plastic surgery, cleft lip and palates and repair of disfigurements.
Urological surgery
Ophthalmological problems.

The out-patient clinic carries
- general pediatric handicapping situations
- neurological panel for diagnostic problems
- amputee clinic
- muscular dystrophy clinic
- cerebral palsy clinic
- speech and hearing problems, diagnosis and treatment.

Services
- Braces and Prosthetics

General Hospital Services for Handicapped Children

A. *Cardiac Clinics* and *Cardio-Respiratory Laboratories* for diagnostic work.
   - Grace-New Haven Community Hospital, Pediatric Clinic
   - Hartford Hospital, Rentschler Pediatric Clinic
   - St. Francis Hospital, Hartford
   - St. Raphael's Hospital, New Haven

B. *Pediatric Metabolic Clinic*
   - Grace-New Haven Community Hospital

Admission through the Pediatric Clinic re diabetes, thyroid disease, cystic fibrosis etc.

C. *Allergy Clinics*
  St. Francis Hospital, Hartford
D. *Hearing and Speech Centers*
  Bridgeport: Speech and Hearing Center, Inc.
  Greenwich: Greenwich Hospital Hearing and Speech Clinic
  New Haven: Grace-New Haven Community Hospital H & S Clinic
  Newington: Newington Crippled Children's Hospital

Institutions for Mentally Retarded.
(State Department of Health, Office of Mental Retardation)
Southbury Training School, Southbury (Woodbury CO 4-8231)
Mansfield State Training School and Hospital, Mansfield (Storrs GA 9-9391)

Schools for the Deaf
American School for the Deaf, West Hartford JA 3-5207
Mystic Oral School for the Deaf, Mystic JE 2687

New Haven Area Rehabilitation Center has day nursery classes for the hard of hearing.

Emotional Handicaps, Institutions for In-Patient Care
Child Study and Treatment Home, Hamden
Institute for Living, Hartford
Institute of Human Relations, New Haven

Child Guidance Clinics

There are 11 State Mental Health clinics throughout the state.

Hartley-Salmon Clinic, Hartford
Institute of Living, Hartford
Yale Child Study Center, New Haven

Facilities for the Blind
Oak Hill School, Hartford CH 2-2274
State Board of Education for the Blind, Children's Services JA 7-6341 ext. 662
Children's Village, Hartford

Institutions for the Environmentally Handicapped
Children's Center, Hamden

Rehabilitation Centers

There are centers in Hartford, New Haven, Waterbury, Bridgeport, Stamford, and Meriden.

We strongly urge the physician to contact these centers for information and new developments.

Jean Wells, m.d., Chairman
West Hartford, Conn.

February 8, 1961

Louis H. Nahum, M.D., Literary Editor
Connecticut Medicine
160 St. Ronan Street
New Haven 11, Connecticut

Dear Dr. Nahum:

So rarely does one get a 'pat on the back' for a job well done. This is especially true if one holds an official position in a medical society. William R. Richards, M.D., General Manager of Connecticut State Medical Society, deserves high praise for the excellent manner in which he is performing the functions of his difficult position.

Report of the General Manager at the semi-annual meeting of House of Delegates, December 6, 1960, as reported in the January 1961 issue of *Connecticut Medicine* is of the same high calibre as his previous reports and writings. This report clearly points to the great danger facing the medical profession and to all citizens who value individual freedom and moral responsibility for ones action. It should be read and re-read by all doctors and given the greatest possible publicity and circulation. It is unfortunate that official reports are not read routinely and so often their educational value is lost. This report of Dr. Richard's should not be 'lost' or 'buried.' Please keep it alive!

Respectfully,
Richard B. Elgosin, m.d.
Hamden, Conn.

February 10, 1961

Dear Dr. Nahum:

I would like you to know of my keen enjoyment and appreciation of two of your articles in recent issues of *Connecticut Medicine*—"Things to Come" in January and "Milton Winternitz" in February. Dr. Winternitz was a true friend to my husband and indirectly to me.

God has given you a special gift of expression and you make wonderful use of it.

Sincerely yours,
Florence Burns

Mrs. George Burns
42 Seymour Avenue
Derby, Connecticut

March 3, 1961

Denis S. O'Connor, M.D., Managing Editor
Connecticut Medicine
160 St. Ronan Street
New Haven 11, Connecticut

Dear Dr. O'Connor:

A copy of the January issue of Connecticut Medicine has come to my attention. I have read the article on page 41 concerning the responsibility of the doctor in death certification.

I was fully aware of the communication written by James J. Corrigan, Coroner for New Haven County, to the General Manager of the Connecticut State Medical Society; and I concur in his views.

The Coroners are presently engaged in developing a revision of the Information Bulletin for Medical Examiners. In it an effort will be made to set forth certain guides and suggestions which, I am sure, will be helpful not only to the medical examiners but to doctors, hospitals, undertakers, police, and others.

The publication of the revised Bulletin will, I am sure, develop a uniform approach to the matter of handling deaths which come within the statutory requirements concerning coroners and medical examiners.

The Coroners are confident that intelligent cooperation will be assured by those who necessarily must cooperate under the existing statutes.

Very truly yours,
Louis W. Schaefer,
Coroner for Hartford County
Hartford, Conn.

Book Reviews

AN INTRODUCTION TO MEDICAL GENETICS. Eighth Edition, by J. A. Fraser Roberts, M.D., Oxford University Press, New York, N. Y., 1959. 255 pp. $7.00.

Reviewed by Herbert A. Lubs, Jr.

The rapid advances in the fields of biochemical genetics and chromosome disorders, as well as increasing application of family studies in unravelling human disease, make a review of the basic principles of human genetics a necessity if the findings are to be integrated into the general body of medical knowledge. To date, there is no single book covering all of these topics, but there are many excellent texts which cover various facets of the field. The two books reviewed below represent two different approaches to the principles underlying human genetics.

Fraser Roberts has attempted to present these fundamentals in 254 pages and, in general, succeeds admirably. The various modes of inheritance are thoroughly described and clear diagrams are provided of the chromosome transmission of the traits as well as a number of clinical examples. A surprising amount of statistics are clearly presented through the intuitive approach and no formulae are at hand to frighten the mathematically timid individual. The chapter on blood groups is succinct and to the point. The sections on linkage and on multiple gene inheritance are satisfactory. What is missing, however, is an adequate discussion of mitosis, meiosis and the rather complex pathway from gene to the final chemical product. Unfortunately, a clear understanding of these more basic ideas is essential if one is to follow the advances in the two major areas—biochemical and chromosome disorders. The text is generally well written and the prime virtue is that which the author intended—brevity. With the reservations mentioned, one should be able to acquire a working understanding of the principles of human genetics in four or five evenings, and the book is heartily recommended to all clinicians.

PRINCIPLES OF HUMAN GENETICS. Second Edition by Curt Stern, W. H. Freeman & Co., San Francisco, California, 1960. 753 pp. $9.50.

Reviewed by Herbert A. Lubs, Jr.

The text by Curt Stern, however, is designed to be complete and encompasses 733 equally well written pages. There is very little that the clinician might want to find about the principles of genetics that is not clearly and thoroughly expounded. The wealth of Clinical example leads to a much greater appreciation of the richness of human genetic behavior than Roberts' book. The statistics are more demanding, and the text, in general, is more demanding because the topics are considered in greater depth. The chapter on gene action is particularly masterful, as are the chapters on meiosis and mitosis. Sex determination, linkage and mutations are equally worthwhile. Both the various types of single gene inheritance and polygenic inheritance (height, intelligence, etc) are thoroughly described and documented. Perhaps the major hazard of this volume for the physician is its length. The last 250 pages can be skimmed or omitted without sacrificing an understanding of the genetic principles. Even with this omission, however, the realing of the first 500 pages will be a major undertaking, but one which should be richly rewarding. This book, too, is vigorously recommended to practicing physicians in all phases of medicine.

BLOOD DISEASE OF INFANCY AND CHILDHOOD. By Carl H. Smith, M.D. The C. V. Mosby Co., St. Louis, Missouri, 1960. 535 pp. $17.00.

Reviewed by Theodore S. Evans

Dr. Smith states, "The purpose of this book is to present the essentials of pediatric hematology in concise form for the medical student and practitioner." The text of 535 pages is arranged in 27 chapters. The first six chapters describe the hematologic physiology of the fetus, infant and child. Later chapters are concerned with exsanguination transfusions, jaundice, erthroblastosis (two chapters), the anemias (seven chapters) reticulo-endothelial system, blood coagulation the purpuras, and the white blood cells (seven chapters).

The volume presents an up to date summary of the pathologic physiology, diagnosis and treatment of hematologic diseases. It is somewhat repetitive, but the repitition is usually related to a new subject or to a wider view of the same subject.

The table of contents is self explanatory and makes it simple to obtain information on certain subjects.

The index is a delight since it is arranged in two parts, one author's index and two, a subject index.

While the text is hardly concise, it certainly fulfills very nicely the rest of the author's intent. It is an excellent book for ready reference.

THE BIOLOGY OF AGEING. A symposium held at Guttenburg, Tennessee, May 1-3, 1957, under the sponsorship of the American Institute of Biological Sciences and with the support of the National Science Foundation. Edited by Bernard L. Strehler with James E. Ebert, H. Bentley Glass and Nathan W. Shock. Publication No. 6—1961—A.I.B.S., Washington, D. C. 364 pp.

Reviewed by Louis H. Nahum

Ageing is a sociological, economic, psychological and medical problem. As the life span grows, the problem will certainly assume more compelling interest.

It was already recognized early in the century by great biologists and statisticians like Carrell and Pearl. But it has required the impact of the control of infectious diseases upon our socio-economic fabric, to reawaken our interest in the most important problem.

A large amount of research is now being carried out with the assistance of many federal agencies, and facilitated by "sharpened tools" of modern experimental biology to more complex integrative problems such as ageing.

What are the basic mechanisms underlying the gross phenomenon of ageing? and what do we know of them. This conference was supposed to smoke out the consensus and point up the areas of disagreement and also those requiring further study. When we see the spirited discussions that took place there emerges the present philosophy and methodology in this field. The presentation is wide ranging from unicellular organism to higher forms and man himself; from definition to measurement, to molecular and even particulate ageing. Genetic aspects are dealt with, development and ageing, cellular changes during ageing are also considered. There is an important chapter on ionizing radiation and ageing; a most illuminating paper by Nathan Shock on the role of tissue loss in physiological functions of ageing. It demonstrates that aged animals can lose as much as 30 per cent of tissue cells which are then replaced by increased amount and density of tissue substance. This is true of brain, kidney, articular cartilage and muscle. He raises the provocative question as to what extent can the physiological impairments of old age be explained simply by a reduction in the amount of functioning protoplasm or number of functioning cells remaining in the organism.

An excellent section on "Factors In Human Mortality" by M. Spiegelman of the Metropolitan Life Insurance Company, considers both external and biological causes of death. A section by E. Strehler on biochemical factors in ageing in the nervous system shows how little is known on this important subject.

The problems raised and the wide hiatus in our knowledge is made clear in this book. Anyone who intends to study ageing from any standpoint would do well to start with this book.

SURGICAL TECHNIQUE AND PRINCIPLES OF OPERATIVE SURGERY. Sixth Edition, by A. V. Partipilo, M.D. Lea and Febiger, Philadelphia, 1957. 951 pp. $20.00.

Reviewed by Mark A. Hayes

It is a little difficult for this reviewer to justify the arrival of *another* standard textbook covering the entire fields of surgical physiology, pathology and anatomy as well as including much on technique. This is particularly true when other excellent texts already are available.

In general, it appears that this is a perfectly adequate source of information for the uninformed. There are many criticisms which cause it to not meet rigid standards of perfection; these are too numerous in such a large volume to mention specifically item by item.

VIRUS HUNTERS. By Greer Williams. Published by Alfred A. Knopf. 503 pp. $5.95.

Reviewed by Denis S. O'Connor

Virology as we know it today may be considered to be a development of the electron miscroscope which has made the visualization of the virus possible. Prior to that time a virus was the "filterable virus" or something not visible in the old miscroscope, except for the very largest, and small enough to pass through a filter which would not permit the passage of bacteria.

While Pasteur, Jenner and Beijerinck who talked about viruses could not have known viruses as we know them today their use of the term and the accuracy of their observations has given them the distinction of being the founders of this recently developed scientific subdivision of biology.

The importance of this comparatively new field in medicine can only be appreciated when one considers the place it has already found in cancer research and the notable gains in the control of poliomyelitis.

For anyone in the medical or para-medical fields, or anyone interested in the developing medical field, this book will bring him up-to-date on this interesting subject and enable him to read of the current developments fortified by a sound background.

To young people interested in medicine and for students already in medicine this book could be a stimulating influence to a career in research in this field.

The book is written in an easy readable style requiring no medical background.

It is particularly recommended for the vocational library.

FRENCH'S INDEX OF DIFFERENTIAL DIAGNOSIS. Eighth edition, by A. H. Douthwaite, M.D., Editor. The Williams and Wilkins Co., Baltimore, Maryland, 1960. 958 pp. $24.00.

Reviewed by Louis H. Nahum

The list of 20 contributors looks like the medical men in the British hall of fame. Each one is a recognized authority in his special field.

The first Edition of this monumental work appeared in March 1912. So quickly did it catch on that reprintings appeared in Oct. 1912 and Sept. 1913. This is now the 8th Edition completely revised and containing many new illustrations.

Essentially the book is a treatise on the application of differential diagnoses to all the main signs and symptoms of disease. Occasionally a minor symptom or physical sign does not receive a separate treatment, nevertheless it can be found in the general index.

In the body of the book we find symptoms considered while in the index at the end we find gathered together the symptoms under the various diseases. The symptoms are arranged in alphabetical order and the articles on the various symptoms so arranged also discuss the various diseases in which each individual symptom may be observed. At the end is a voluminous index of 51 pages in which one can quickly be directed to the appropriate chapter in the book. Pathology and prognosis are not treated of course but where they have a bearing on differential diagnosis they are dealt with. An example is the usefulness of the action of salicylates as it helps in differentiating acute rheumatic fever from other forms of arthritis. What is missing is a consideration of electrolyte disturbances and some other chemical changes in the blood-like uricacidemia Sodium and potassium disturbances, but they are not detractive of the monumental nature of the information that is quickly brought to one's attention. What is also missing is major symptoms directing attention to hereditable disorders of connective tissue. Symptoms of Marfan's syndromè, of Ehlers-Danlos, Hurlers and

Ellis-Von- Crevold syndrome. But if one understands this, the book will not lose its importance.

When a particular symptom attracts special notice in a given case then the diagnosis has to be established by differentiating between the various diseases to which the symptom may be due. This reviewer had occasion recently to test the value of this index in a patient with diabetes, peptic ulcer and pyelonephritis who suddenly in a matter of three days developed a marked blood loss and shock. Within a few moments the index led him to the appropriate article and the recognition that we were dealing with a case of sepsis due either to a coleform bacillus or B Welchii.

Everyone is interested in differential diagnoses not only in their practice but as an intellectual exercise. The great popularity of case reports in the New England Journal and in other national medical publications attest to this fact. Every medical school sharpens the diagnostic acumen of its students by means of the clinical pathological conferences. There is no book on differential diagnosis that quite equals this Index in the ease of searching out the meaningful symptom and of quickly arriving at a probable diagnosis. Great clinical scholarship went into its writing.

The printing is excellent and the paper superb. The volume being so large the type is somewhat smaller than usual but this can hardly be of any significance since the book is for reference not for extended reading.

Every physician be he interne, generalist or specialist would greatly increase his diagnostic acumen by resorting to this book and of course his security in the therapeutic situation that follows accurate diagnosis. This reviewer believes it should be on the desk of every physician in whatever branch of medicine he functions.

THE HAND. A Manual and Atlas for the General Surgeon. By Dr. Henry C. Marble. Published by W. B. Saunders Co., Philadelphia, Pa., 1960. 207 pp. $7.00.

Reviewed by Denis S. O'Connor

I do not think that Dr. Marble needs to apologize for "another book on the hand." Those of us who have seen the disastrous results of treatment of hand injuries and infections over the years, who have seen the lack of appreciation on the part of some doctors, many employers and most insurance adjusters for that incredibly intricate mechanism—any considerable damage to which constitutes a personal tragedy—will welcome every book and article on the subject until the principles of hand surgery are thoroughly known and universally observed.

This book covers injuries, infections and tumors. In each chapter are numerous drawings to explain and illustrate. Dr. Marble has done all that could be accomplished within the covers of the book. Only the complete mastering of the principles of hand surgery and the developing of the meticulous surgical technique which hand surgery demands is going to give us the kind of care for hand injuries which at the present time we should have.

One of the greatest bars to the development of good hand surgeons is the unwillingness of compensation insurance carriers to recognize the skill and time which hand conditions require for satisfactory results. The surgeon who perfects himself in hand surgery is a highly skilled artist and must be remunerated adequately.

This book is highly recommended for anyone whether he be the general practitioner who must because of his isolation do hand surgery or the surgeon who wishes to do his own hand surgery.

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Special Notices

HARTFORD HOSPITAL

Saturday Morning 11 O'clock Guest Speakers

April 15—John Reinhold, M.D., Director of Pepper Research Laboratory, University of Pennsylvania. Subject: Clinical Aspects of Bilirubin Metabolism.

April 22—Hartford Hospital Research Projects. 10:00 A.M. to 12 NOON.

1. "Current Research in Cardiac Diseases"—Cardiopulmonary Group.
2. "The Photoelectric Ear Piece in Quantitative Dye Dilution Studies"—Arthur O. Phinney, M.D.
3. "The Clinician and the Calory Count"—David Babbott, M.D.
4. "Intra-articular Corticosteriod Therapy: Comparative Study of 1471 Knee Injections"—Edward Scull, M.D.
5. "Hypernephroma with Peripheral Neuropathy"—Norman W. Saunders, M.D.
6. "Monitoring and Resucitation: Restarting the Heart" —Morris J. Seide, M.D.
7. "Familial Hypocalcemia, Latent Tetany and Calcification of Basal Ganglia: Report of Kindred"—Ralph R. Reinfrank, M.D.
8. "Clinical Experience with S-Fluorouracil"—Henry M. Williams, M.D.

April 29—David Greene, M.D., Professor of Medicine, University of Buffalo. Subject: Recent Advances in Resuscitation.

May 5-6 (Two-Day Visiting Speaker)—George Cahill, M.D., Associate Professor of Medicine, Harvard. Subject: May 5, Newington Veterans Administration Hospital, at 5:00 P.M., Recent Advances in Diabetes. Subject: May 6, Hartford Hospital, at 11:00 A.M., Lipic Metabolism and Atherosclerosis.

May 13—Frederic Blodgett, M.D., Assistant Professor of Pediatrics, Yale. Subject: Causes and Treatment of Congenital Abnormalities in Children.

May 20—S. Leon Israel, M.D., Professor of Obstetrics and Gynecology, University of Pennsylvania Graduate School of Medicine. Subject: 10:00 A.M., The Differential Diagnosis and Treatment of Amenorrhea. 11:00 A.M., The Hypothalamus As a Pelvic Organ.

May 27—Joseph S. McGuire, M.D., Research Associate in Dermatology, Yale. Subject: Hormonal Control of Pigmentation.

MEETING ON PERINATAL MORBIDITY AND MORTALITY

With the cooperation of the Committee on Perinatal Morbidity and Mortality of The Connecticut State Medical Society, The Connecticut Public Health Association has prepared a program on this subject.

The subjects to be covered will be as follows: A Team Approach Toward Reducing Perinatal Morbidity and Mortality; Sociological Factors Including Psychogenic Factors; Genetic Factors. Speakers will include Connecticut and Massachusetts persons from the fields of pediatrics, obstetrics, anesthesiology, nursing, social work and hospital administration.

The meeting will be held on Thursday, April 20, 1961, at 2 P.M., at the Matarese Circle (Restaurant), 2513 Berlin Turnpike, Newington, Tel. MOhawk 6-9005. (Matarese Circle is about 4 miles south of Hartford on Route 5 on the west side of the road. It is a white, one-story building.) Those who wish to have luncheon, which will be at 12:30, may make reservations by writing to Mr. Bernard Walsh, West Hartford Health Department, West Hartford, cost $2.50.

SYMPOSIUM ON VIROLOGY

Wednesday, April 19, 1961

Conducted by the Department of Pediatrics
Hospital of St. Raphael

New Haven, Connecticut

Program sponsored by Mead Johnson and Company

Conference Chairman:
Paul F. McAlenney, M.D.
Chairman
Department of Pediatrics
Hospital of St. Rapheal

Conference Moderator:
Charles S. Culotta, M.D.
Head of Childrens Medical Service
Hospital of St. Raphael

Morning Session, 9:15 A.M.

9:15 A.M. Welcome and Opening Remarks. Paul F. McAlenney, M.D. Associate Clinical Professor of Pediatrics, Yale University School of Medicine.

9:30 A.M. Attenuated Measles Virus Vaccination. Samuel L. Katz, M.D. Associate in Pediatrics, Harvard Medical School, Pediatrician-in-Chief, Beth Israel Hospital, Boston, Massachusetts.

10:00 A.M. Coxsackie Virus Infection in Childhood. Horace L. Hodes, M.D. Clinical Professor of Pediatrics, College of Physicians and Surgeons, Columbia

University; Pediatrician-in-Chief, Mount Sinai Hospital, New York, New York.

10:30 A.M. New Viruses in Diseases of the Upper Respiratory Track. Robert H. Parrott, M.D. Clinical Professor of Pediatrics, Georgetown University Medical School, and George Washington University Medical School. Physician-in-Chief, Childrens Hospital and Director of Children's Hospital Research Foundation; Washington, D. C.

11:00 A.M. Viruses and Cancer. Gilbert Dalldorf, M.D. Director of the Division of Experimental Pathology, Sloan-Kettering Institute; Rye, New York.

11:30 A.M. Question and Answer Period.

12:00 Noon Luncheon Period.

Afternoon Session, 2:00 P.M.

2:00 P.M. Vaccinia Hyperimmune Gamma Globulin in Small Pox. C. Henry Kempe, M.D. Professor and Chairman, Department of Pediatrics, University of Colorado School of Medicine, Denver, Colorado.

2:30 P.M. Influenza Virus Infection and Vaccination Status. Edward C. Curnen, Jr., M.D. Carpentier Professor of Pediatrics, College of Physicians and Surgeons, Columbia University; Director of Pediatric Services, Babies Hospital, Columbia-Presbyterian Medical Center, New York, N. Y.

3:00 P.M. The Current Status of Vaccination against Poliomyelitis. Dorothy M. Horstmann, M.D. Associate Professor of Pediatrics and Preventive Medicine. Yale University School of Medicine, New Haven, Conn.

3:30 P.M. Observations of Pediatric Interest in Cancer Virology. Harold W. Dargeon, M.D. Chairman, Department of Pediatrics, Memorial Hospital for Cancer and Allied Diseases. Associate Professor of Clinical Pediatrics, Cornell University Medical College, New York, N. Y.

4:00 P.M. Question and Answer Period.

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CONNECTICUT MEDICINE

Connecticut State Medical Journal

Volume XXV MAY, 1961 Number 5

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Paul Dudley White

The Pediatrician's Role In The Prevention And Treatment Of Emotional Disturbance 276
Milton J. E. Senn

Uncomplicated Obstetrics—A Revaluation 279
C. B. Crampton

With A Critical Note By
Irving Friedman

Cervical-Lingual-Masticator Myoclonus 284
William F. Eckhardt, Jr., M.D.

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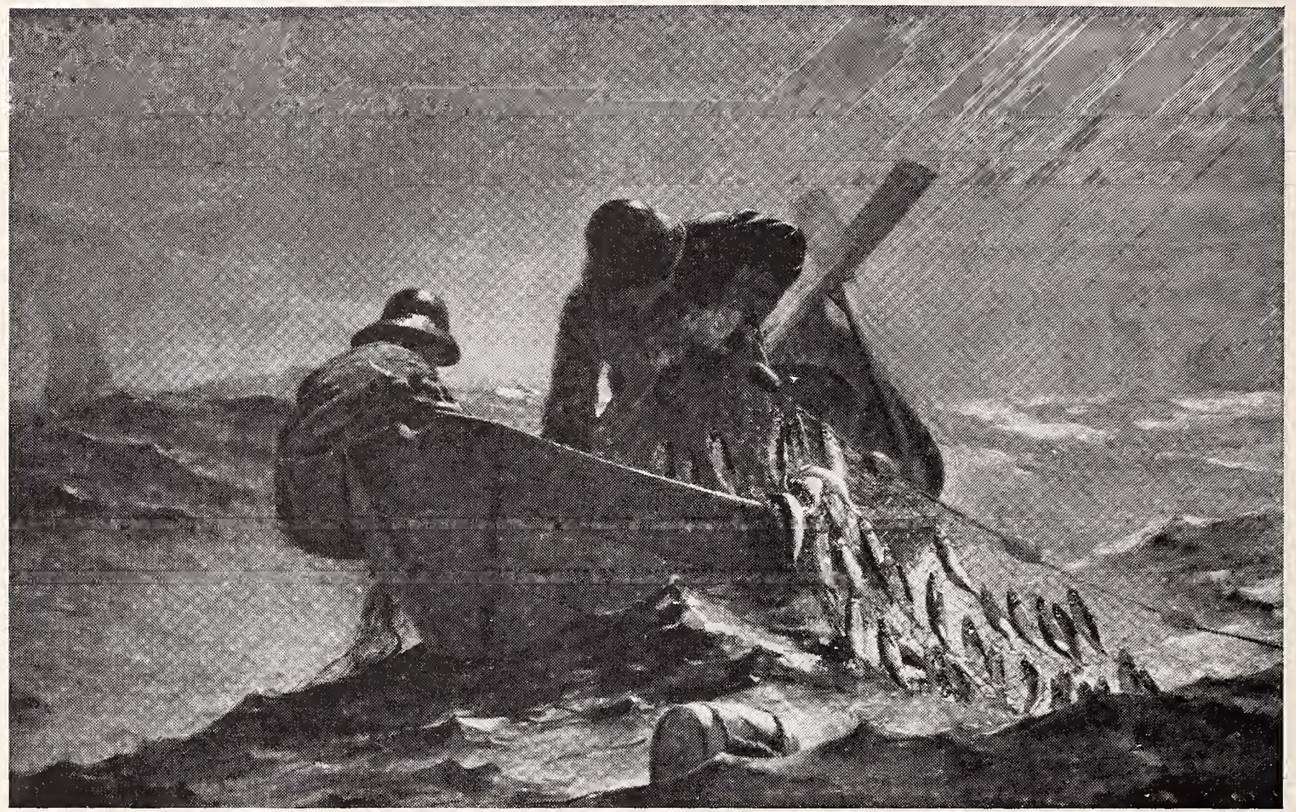

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SEARLE

THOMAS MICHAEL FEENEY, M.D.

Born: Boston, Massachusetts, July 22, 1910

Pre-Medical Education: Boston College, A.B., 1932

Medical School: Boston University, M.D., 1936

Internship: St. Francis Hospital, Hartford, 1936-37

Residencies: St. Francis Hospital, Pathology, 1937-38
Boston City Hospital, Surgery and Urology, 1938-40

Military Service: U.S. Navy Reserve, Commissioned 1943, Lieutenant, U.S.N.R., honorably discharged 1946, Commander, U.S.N.R. Service in European and Pacific theatres of war, Omaha Beachhead, Normandy, Southern France invasion, invasion of Iwo Jima and Okinawa

Hospital Appointments:
Attending Urology, St. Francis Hospital, Hartford
Assistant Urology, McCook Hospital, Hartford
Consultant Urology, Manchester Memorial Hospital, Manchester.
Attending Urology, Rocky Hill Veterans' Hospital

Diplomate:
American Board of Surgery
American Board of Urology

Offices Held:
Secretary-Treasurer, Hartford County Medical Association 1949-1953
Vice President, Hartford County Medical Association 1954
President, Hartford County Medical Association 1955
Vice Speaker, House of Delegates, Connecticut State Medical Society 1955-1958
Speaker, House of Delegates, Connecticut State Medical Society 1958-1959
Professional Policy Committee, Connecticut Medical Service 5 years
Chairman, Liaison Committee, Connecticut State Bar Association
Chairman of Council, Connecticut State Medical Society 1958-1959
Chairman Executive Committee, St. Francis Hospital Medical and Surgical Staff 1952
Chairman, Governor's Advisory Committee to Commissioner of Welfare Kerr-Mills Legislation for Connecticut 1961

Professional Associations:
Hartford Medical Society
Hartford County Medical Association
Connecticut State Medical Society
American Medical Association
Connecticut American Board Surgeons
New England Urological Association

[illegible]

THE PRESIDENT'S PAGE

It has been the custom for some years now for the newly elected President to present his initial cummunication to the membership in the May issue of Connecticut Medicine. Of course, my initial thought is one of gratitude to all the members of the Connecticut State Medical Society for the honor they have bestowed upon me. Yet, honored as I am, I am equally impressed with the responsibilities of the office. It is encouraging to reflect however, that the responsibilities are not mine alone; they belong also to each and every physician member of the Society.

The years 1960-1961 may well be the years of decision for the freedom of the medical profession, not only in Connecticut, but in the entire United States. One frequently hears of the '60's as the decade of the "New Frontier". Let us be mindful that the eternal frontier is the defense of freedom and in the vanguard of that struggle is medicine and its' professional freedom. Let us take courage in the fact that our cause,—that of a free medical profession,—is right and just. Under ordinary circumstances, the fact that our cause is right and just would be sufficient to maintain that cause. These are not ordinary times as witness the statement of one outspoken liberal who states that democracy's answer to communism is the welfare state.

The main assault on freedom of medical practice is being waged on the socioeconomic front. The answer to these attacks and material for the individual physician to answer these attacks is published in readily digestible form in "Connecticut Medicine" and in the "AMA News". Although your officers are well aware of their responsibility in presenting Medicine's side of the story in this fight for freedom, it is essential that each and every physician member present our position before church groups, service organizations, farm groups, women's organizations and other such groups. Do not wait to be asked to speak to these groups, seek out the opportunity to speak. Let there be no expression of hopelessness, apathy or defeatism. Recognize the fact that you as a physician are involved in a life and death struggle for your own professional freedom and that of your patient.

Do not be sent down any side road with the charge that American Medicine is negativistic in its' approach to the problems of financing of medical care. American medicine today has a positive answer to the health needs of the aged. We physicians, because of our closeness to the problem, recognize that among the ever increasing number of persons 65 years and over there are some who need help, not only in the area of health care but also for food, housing, clothing and the other necessities of life. The Kerr-Mills Bill, enacted by Congress last August, meets the needs of these people for medical care. It is especially designed to help those who need help, it is prudent economically, the bill provides for local administration, the law provides and maintains the availability of high quality medical care.

Through the medium of this President's Page let me urge you to give of your time, ability and means to see to it that the Kerr-Mills Bill is implemented without any unnecessary delay in the State of Connecticut. Exercise your constitutional right of petition. Our rallying point is freedom, freedom of medical practice and be assured that this is one battle that can be lost but once.

Thomas Michael Feeney, M.D.

THE ROLE OF EMOTIONAL FACTORS IN CARDIOVASCULAR DISEASE*

Paul Dudley White, m.d., *Boston, Massachusetts*

There has been a great deal of discussion and controversy concerning the role of emotional factors in the simulation, causation, and aggravation of heart disease and I would like to take up these three facets of the problem in this order.

A. *Simulation of cardiovascular disease by the emotional production of cardiovascular symptoms.*

My first experience in the recognition of this condition dates back to the fall of 1916 when I was a member of one of the American units that joined the British Expeditionary Force in France at the height of the trench warfare on the Somme. I had heard about the problem very briefly in making rounds at Hampstead near London with Sir James Mackenzie and Thomas Lewis. Incidentally, Thomas Lewis was then house physician for three visiting internists at the Hampstead Heart Hospital. These three were, in addition to James Mackenzie, Clifford Allbutt and William Osler, a formidable trio indeed. On rounds the day I visited, there was a vigorous discussion between Mackenzie and Lewis which I shall never forget. Mackenzie felt quite certain about the cause of the symptoms, which were complained of by some of these men whom I later myself saw in France, which consisted of dyspnea mostly of the sighing variety with hyperventilation, palpitation (usually simply forceful sinus tachycardia), heartache over the precordium (not substernally), and faintness, sometimes with actual syncope. In addition there was often a good deal of perspiration, obvious nervousness, and insomnia in a good many of the patients. Mackenzie attributed this to the first stage of thyrotoxicosis but Lewis would have none of it. Lewis contended from erroneous studies that he had made that these symptoms were due to infection. Apparently contaminated blood and urine cultures had given him this impression. Both these astute observers were wrong but we don't yet know just why there is this condition which we have called since the First World War neurocirculatory asthenia—a better term than anxiety neurosis or irritable heart of soldiers or effort syndrome. One can be anxious without these symptoms and one can have irritability of the heart, with extrasystoles, for example, without the symptoms. It is the combination of symptoms that is important and it tends to be hereditary.

One interesting aspect of the problem is that some patients improve as they get older largely because they become adjusted to the situation but they rarely cease having symptoms. On the other hand, they outlive the expectation of the rest of the population as we found in a 25 year follow-up study of several hundred cases collected in the 1920's after the First World War. I personally still follow many patients whom I saw thirty or forty years ago who continue in good structural health but still with some symptoms of neurocirculatory asthenia.

The importance of neurocirculatory asthenia is in recognizing that it exists, in the frequent misdiagnosis of heart disease in these cases, and in the inadequacy of specific treatment.

One final comment might be made and that is that quite often heart disease is present too. In other words, neurocirculatory asthenia and heart disease of any type may co-exist independently, one condition often aggravating the other.

B. *The Problem of Emotional Factors as a Cause of Cardiovascular Disease is Still an Unsolved Problem.*

There is some indication that the serial repetition of much emotional stress may be a factor in the initiation and development of important so-called essential hypertension. The Russians have strongly believed this and say that they are going to prove this to us when we visit Moscow in May. Perhaps they are right but there are a good many other causes of hypertension of structural nature, such for example as atherosclerotic blocking of the circulation of the renal arteries supplying one or both kidneys which is being discovered more and more often now and which is sometimes curable by surgery.

I doubt if there is a relationship of emotional stress in the case of the mother in the production of congenital cardiovascular disease. I doubt also that emotional stress plays any role in the initiation of rheumatic heart disease or cardiovascular syphilis or diphtheritic myocarditis although perhaps it does, to a certain extent, in the production of thyrotoxicosis as a cause of important heart disease in a few cases.

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* *Presented at a Breakfast Meeting of the Phoenix Institute of Neurology and Psychiatry on January 28, 1961.*

Finally, we come to serious atherosclerosis of several of the important arterial systems of the body —coronary, cerebral, aortic, renal, and iliac. Stress has been noted by some to increase the serum cholesterol content but this does not mean necessarily that that is the primary cause of atherosclerosis. Others have said that physical stress, perhaps aggravated or induced by emotional stress, increases the wear and tear on the circulation and that thereby hydrodynamic factors may induce the first lesions of atherosclerosis of the intima of the arteries, but this is rather a guess, and I have known of no proof of it. If we combine, however, the physical and the chemical results of stress, perhaps we have something to consider. However, the very fact that my patients with neurocirculatory asthenia who constantly seem to be under stress have outlived their expectation and many who are quite well without any evidence of atherosclerosis at 70 or 80 present evidence contradictory to other opinions.

C. *Emotional Factors Causing Aggravation of Cardiovascular Disease.*

Here there is no doubt about the positive evidence. I have had many patients who have angina pectoris on a background of serious coronary atherosclerosis when they are emotionally disturbed as well as physically under strain; in fact not infrequently the emotional stress seems more aggravating than physical stress and here, of course, the outpouring of epinephrine from the adrenal glands doubtless plays a role. It is for this reason that some years ago Dr. Raab of Vermont carried out roentgen therapy of the adrenal glands for the treatment of angina pectoris. This was given up because of the failure of confirmation of this idea and of the findings of Dr. Raab, which, however, had a rational basis.

Sudden death has occurred frequently in the case of spectators in the stands of the stadiums at exciting football matches or sitting in their own living rooms in front of a television screen that portrays a very exciting boxing match. It is particularly when emotional stress is added to physical stress and a hearty meal and cold weather that the combination of all these factors is likely to cause havoc.

Of course, it is not simply in coronary heart disease that emotional factors may cause an aggravation of symptoms, signs, or death itself. Other kinds of heart disease may also be aggravated, for example, a patient who has rheumatic heart disease may have the induction of paroxysmal fibrillation, or, if the myocardial reserve is very limited, of congestive heart failure in the form of pulmonary edema, as a result of emotional stress. The same applies to hypertensive heart disease when the reserve is low.

Thus the relationship of emotional factors in the simulation, production, and aggravation of cardiovascular disease remains a most important and interesting problem, knowledge-about-which already allows us to apply helpful measures in both preventive medicine and in the treatment of patients already diseased. To claim, however, that we must all be tranquillized because stress is bad for us is an equally serious problem. A certain amount of stress, emotional and physical, is probably necessary for the maintenance of good health. At any rate, no one on earth can avoid some. It is just a question of having the proper proportion of it and also to realize that one of the best antidotes for emotional stress and its effect is physical work or exercise and muscular fatigue therefrom, which, in my experience, has been infinitely superior to the use of drugs and it isn't psychotherapy alone. This is physiologically a matter of common sense and should be instituted in the future as a measure of protection of the health of the citizens of this country in a program of middle age fitness.

THE PEDIATRICIAN'S ROLE IN THE PREVENTION AND TREATMENT OF EMOTIONAL DISTURBANCE*

Milton J. E. Senn, m.d.,† *New Haven*

Before assessing the role of the non-psychiatric physician, particularly the pediatrician, in the role frequently assigned him as a person to prevent and treat emotional disturbances, let us first look at some principles we consider pertinent and proved by clinical investigation. First, the words "emotional disturbances" include a variety of disorders from the frank psychoses to the normal deviances of childhood. Obviously, when the latter constitute "problems," a child is less the patient than the parent, the school teacher, or any other professional or lay person who is disturbed by some element of the child's performance.

Second, although it has been generally assumed for a long time that emotional illnesses in childhood are precursors to psychologic maladjustment in later life, until recently there has been little scientific evidence to justify these clinical impressions. Long-term studies of children diagnosed as emotionally ill are just beginning to be made. One of the most valuable is a 30-year follow-up of children from a St. Louis child guidance clinic[1] which indicates that children with psychiatric disorders frequently become adults who have significant maladjustment. Furthermore, this study showed that there is a significant correlation between outcome in later life, with the type of disorder and kind of symptoms present in childhood. Especially malignant were the disorders characterized by aggressive antisocial behavior; out of this group came the greatest number of psychotic adults and the sociopaths of adulthood. The St. Louis study found that children with neurotic disorders provided the fewest number of sick adults; children diagnosed as shy and withdrawn (a group culturally not popular in the U.S.A. today) did surprisingly well when re-evaluated later. The younger the child and his parents were when they came for psychiatric help, the more that could be done for them. Children with few symptoms at whatever age, also tended to have a better recovery rate than those with many symptoms. Since symptoms tend to multiply, an obvious deduction is that if children and their parents are given help early and at the beginning of their illness, the more likely there will be a resolution of the difficulties and a prevention of more serious problems.

Third, although we continue to add new knowledge about the causes of emotional disturbances, far more remains unknown. There are cycles in which experts first put greatest blame on heredity and constitution, and less on environmental causation, and then there is a swing to greater emphasis on the environment. It seems needless to debate whether behavior is exclusively environmental or exclusively constitutional. More meaningful is to ask how much of a problem is caused by each. We do not then deal with a one-or-the-other phenomenon, but rather a multi-faceted problem in which every element of causation must be recognized in order to be adequately treated.

Some recent evidence of causation emphasizes the following:

(1) Babies at birth already differ from one another in constitutional make-up. The degree of activity, and adaptability remain at the same intensity in later childhood as they were earlier, and this suggests that innate differences in infants may be significant factors in determining how children respond to their environment. This would offer one explanation for the apparent paradox that in the same family one child may be seriously disturbed and others be normal. The alternative view could be that the environment also was not the same for each child, and that the child in difficulty arrived at a time in the family history that was more stressful than it had been at other times.

(2) Something called pseudo heredity has been found in families where children become emotionally sick, in an atmosphere of adult psychopathology. Such contagiousness is not true only for severe psychoses, but also for minor behavior disorders. For example, a child's inability to attend school because of an irrational feeling of some aspect of the school situation is frequently related to his fear of leaving home, rather than fear of going to school. And in it, the parent exhibits as much anxiety about separating from the child as the child shows in leaving the parent. Direct observation of the interaction between these mothers and their children reveals that the mother's anxiety is directly connected to the child during the process of sep-

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aration; this kindled fears in the child which in turn multiplied the anxieties of the parent. School phobia has been reported as recurrent in successive generations. I mention school phobias particularly as an example of a complicated problem including parent and child, because school learning problems today make up the leading reasons for children attending child guidance clinics. A positive correlation has also been found between emotional problems and failure to learn in school.

(3) Research workers have found a correlation between emotional difficulties and brain injury. Brain damaged children, as well as those who are mentally defective, often have behavior problems because of their aggressivity and poor impulse-control, and frequently associated with over-dependency arising from parental over-concern.

(4) Research data about which there are no longer any questions of validity have to do with the effects of early psychologic deprivation, such as occurs when infants are reared in institutions, bad foster homes, or in a series of foster homes. Such infants deprived of individual and personalized care, show a variety of abnormal physiological and psychological reactions; these bad effects may be reversed to some degree when mothering care is supplied again. Where a residue persists it takes the form of defects in general intelligence, emotional responsiveness, and in personal relationships, inferior scholastic adjustments and sociopathic behavior.

(5) The most prevalent emotional disturbances are situational, or reactions to life stress such as problems of feeding, eating, habit training, grief, separation anxiety, school adjustment, learning to read and write, and sex behavior. Fortunately these disturbances in childhood have the best chance of improvement because of their own natural maturational tendencies, or because of the early intervention from non-psychiatric as well as psychiatric physicians, social workers, family service agencies, nurses, guidance counselors and teachers. Proper early recognition of the problems, and prompt help to parents of such children invariably results in a lessening of symptomatology and very often in a complete cessation of the problems.

PREVENTION

As with medical problems generally, physicians and laymen are even more desirous of preventing illness than of curing it. The reasons are obvious. But prevention is not easy, partly because we are unwilling to establish programs of prevention, even though we accept the obvious. For example, there is good evidence to show that most of our emotional disturbances are due to stresses of daily life, yet we have failed to really come to grips with the problem of stress reduction in such situations as school learning problems. Efforts made at improving public education in ways which would have mental health benefits as well as educational opportunities are found unacceptable because of their financial costs.

Although there is proof that family disintegration fosters emotional difficulties in children, we have not done enough practically to keep families together. We have preached the sanctity of the family and the role of the mother, but in our social welfare we have not done enough to keep mothers in the home and employed there, instead of in the business world. The clear-cut evidence of emotional deprivation in childhood has not influenced us enough to do away with foundling hospitals, or make them more than mere custodial facilities, and foster home placement has not adequately been provided in lieu of institutional care.

Only recently have we begun to attack successfully the causes of organic brain damage which leads to emotional difficulties. Even today there is inadequate prenatal care, particularly in such things as detecting Rh blood incompatibility and providing safe obstetrical care. All these examples I would include in what is called the primary line of defense against the development of emotional disturbances in childhood. I would include many others in pediatric practice. The rooming in care of the newborn, as well as supportive-educational assistance to a recently delivered mother, have been shown to increase her feelings of competence in newborn care, and in relieving anxiety which may run the gamut from a mild depressiveness to a postpartum psychosis. The selective use of hospitalization for sick children is preventive of emotional disturbances; keeping sick children at home, or admitting them to hospital only when there is particular need, reduces the separation anxiety, which may be particularly keen in the preschool child, the child who has recently been displaced by the birth of a new sibling, or who may have experienced an equally sorrowful experience. Permitting parents to visit sick children in hospital freely, even allowing them to room in for a night or two with the sick child, has been found to be reassuring to parent and child. Psychologic preparation of a child for such potentially anxiety provoking experience as going into hospital, facing surgery, anticipating the death of a loved one—is psychologically beneficial. As physicians we are beginning to realize that some of the disturbances of behavior are iatrogenic, that is, medically induced, as when we keep a child confined to bed longer than his symptoms warrant, and produce in him a state of chronic tension which is demonstrated by tics, mannerisms of all kinds, and bad temper.

As pediatricians we are beginning to realize the importance of dealing differently than we once did with the parents of our patients. The physician who rates the mother as a potential problem every time he sees her sick child, invariably shows his resentment to her, and causes her to feel either guilty or angry, or both. These physician-inspired attitudes and feelings may lead her to be overly concerned with her child, or sometimes punitive, and more frequently vacillating in attitudes from one extreme of concern to the opposite of rejection. The great success of the pediatrician-writer Spock has been in his ability to make parents feel that he is on their side, sympathetic and understanding of their problems as well as those of the child. So in pediatrician-parent relationship, time must be spent for listening to each other and for psychotherapeutic counseling.

The secondary line of defense in prevention should consist of the early diagnosis of emotional disturbances in children and parents. The pediatrician sees the sick child before the psychiatrist. Careful, thoughtful, supportive referral to the psychiatrist often spells success in psychiatric treatment, whereas hurried, incomplete, half-hearted referral by a pediatrician blocks the establishment of early rapport between the parent and the psychiatrist.

But the relationship between pediatrician and psychiatrist should not be a one-way communication. When the psychiatrist is able to keep the pediatrician informed, in general terms, about the progress of his child patient in psychiatry, and when the psychiatrist carefully and thoughtfully continues to use the pediatrician as a consultant and as one who also serves in a supportive role psychologically of parent and child, then the pediatrician also feels satisfied and encouraged. This will facilitate further good relationships on an interprofessional basis when other patients are to be referred to the psychiatrist.

Lastly, the third line of defense in prevention consists of adequate and skilled treatment for the mentally ill by psychiatrists. Here the pediatrician has a less direct role, but nevertheless an important one. As he supports the establishment of more and better child guidance clinics, as he works for improved legislation for the care of the mentally sick, as he strives to improve the care of children in welfare agencies—he contributes directly in many ways individually, and in demonstrating leadership to others who must join him if we are to attain any degree of success in coping with the serious problem of emotional disturbance in our society.

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There is one science, Roger Bacon says, more perfect than others, which is needed to verify the others, the science of experiment, surpassing the sciences dependent on argument, since these sciences do not bring certainty, however strong the reasoning, unless experiment be added to test their conclusions. Experimental science alone is able to ascertain what can be effected by nature, what by art, what by fraud. It alone teaches how to judge all the follies of the magician, just as logic can be used to test argument.—B. L. Gordon, *Medieval And Renaissance Medicine,* 1959.

UNCOMPLICATED OBSTETRICS – A REVALUATION

C. B. Crampton, M.D.,* *Middletown*

With A Critical Note By

Irving Friedman, M.D.,† *New Haven*

As the practice of obstetrics has come increasingly into the hands of specialists the management of the "normal" patient in labor has undergone some radical changes in the past several years. A perusal of the standard texts of obstetrics, however, discloses that the subject matter dealing with this aspect of the field has changed very little and the criteria of good obstetrical practice seems not to take full cognizance of the fact that most obstetrical patients, at least in urban areas, are now delivered in hospitals with good laboratory facilities, a blood bank, and by men well trained in the specialty armed with antibiotic drugs of great potency. Most obstetricians feel that more manipulative procedures than are commonly taught in medical schools and hospitals can be done safely during the management of labor with benefit to their patients. Papers in the obstetrical journals advocating elective induction of labor or urging much more liberal use of the cesarean operation indicate that there is a widespread practice of "manipulative" obstetrics in good hospitals and all of us in the private practice of the specialty are aware that this is the case. The question arises whether the "newer obstetrics" represents better obstetrics and if so whether medical students and house officers should continue to be trained in practices which are, in fact, outmoded. The present paper is essentially an account of the management of labor and delivery of something over one thousand uncomplicated cases which were treated in the past four years by the author using a fairly consistant routine involving more manipulation than is commonly taught to represent conservative treatment.

VAGINAL EXAMINATION LATE IN PREGNANCY

Traditionally patients have been told "keep everything out of the birth canal in the last month or six weeks of pregnancy; no douches, intercourse, tub baths etc.," and physicians have felt this rule included pelvic examinations in the office. Most patients in the past probably had only one pelvic examination during gestation and that examination was made generally in the first trimester. Often this was true even if a patient went far beyond her expected date, the physician going on the assumption that when a patient is ready she will go into labor.

Much, however, can be learned by a pelvic examination at term and occasionally an obstetrical emergency can be avoided through knowledge obtained at term by a pelvic examination. If such examinations are done routinely one can judge more accurately whether or not the EDC is approximately correct and this often proves very reassuring to the patient if it serves no other purpose. But more importantly it frequently reveals vital information to the obstetrician such as the presence of an unsuspected breech or a malpresentation of the baby or an obstructing tumor and occasionally one will find a cervix taken up and dilated four to six centimeters with tense membranes presenting even though the patient has not been aware of uterine contractions. This information is of great importance if a multiparous patient lives many miles away and especially if her transportation is not readily available or winter roads make traveling hazardous.

In caring for the last thousand uncomplicated cases pelvic examinations have been done routinely in my office on patients in the week of their EDC and repeated if necessary at a later time if labor did not supervene at the expected time. The examinations were done using gloves which had been sterilized but subsequently had been kept "clean"—not sterile. When I first began this routine the patients had the vulvae washed by the nurse but in recent months this has been considered unnecessary and no special preparation for the vaginal examination is done now. In no case of the thousand patients did antepartum infection supervene or any accident occur.

BACTERIAL VAGINAL FLORA IN LATE PREGNANCY

Early in this investigation with the thought that if infection occurred as a result of office vaginal examinations it would be well to know that organisms were present in the vagina, cervical cultures were made on a series of fifty consecutive patients in the week of the expected date of confinement. A clean (not sterile) speculum was introduced into the vagina with the patient in stirrups. With the cervix widely exposed a sterile applicator was introduced into the cervical canal and then placed in a tube containing a small amount of broth which served as a transport medium. All cultures were started within two hours after they were taken. The following table lists the organisms grown:

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DISCUSSION OF THE BACTERIAL FLORA

The table shows an interesting spectrum of organisms and a cursory glance shows that three organisms (Lactobacillus, Staph Albus and Alpha Streptococcus) are found commonly in the vaginal tract of a gravid patient at term. Less commonly, but not rarely, one finds Candida Albicans and other Candida species, Enterococci, corybacteria, Yeasts, Beta Strep of other groups than Group A, Gamma Strep (not enterococci and Pepto Strep). Proteus sp., Bacteroides sp., E. Coli and Bacillus sp. were uncommon inhabitants of the cultures studied. Twenty-seven cultures showed only one or two organisms, the remaining 23 contained three or four different organisms and none showed more than four.

ESTIMATION OF PATIENT'S READINESS FOR LABOR

At the time the cultures were taken a note was made concerning the condition of the cervix relative to its degree of readiness for labor. Subsequently the date of labor was checked against this estimate in order to determine how close clinical judgement would coincide with the actual fact.

There was a group of 20 patients of the 50 who were thought to be on the brink of labor. Two-thirds of this group went into labor within three days of this evaluation *but the other one-third of the group did not start labor until five to eight days after labor was considered imminent.*

By contrast in the remainder of the group of 50 there were 30 patients who were thought *not* to be ready for labor *and yet six of these began labor within three days after the examination.*

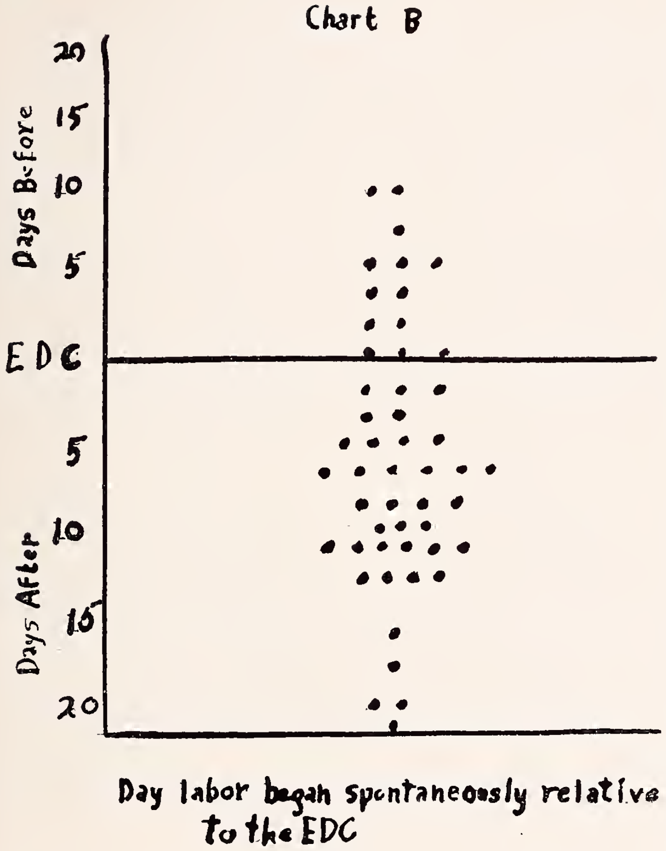
In order to show the relation between the E.D.C. and the date of spontaneous onset of labor the relevant data were charted.

A glance at the chart reveals what any obstetrician knows; the E.D.C. is the foggiest kind of an estimate of the time when labor can be expected.

The impression was confirmed from the foregoing that an experienced obstetrician can make a rough estimation of the readiness of a patient for labor; he can also make serious errors in such an estimate and he surely must not rely on the E.D.C.

CHART A
ORGANISMS ISOLATED FROM 50 VAGINAL-CERVICAL CULTURES—
DR. CRAMPTON STUDY 1958-59

PATIENTS	CANDIDA ALBICANS	CANDIDA SP.	YEASTS	LACTOBACILLUS SP.	STAPH ALBUS	BETA STREP (NOT GROUP A)	ALPHA STREP	GAMMA STREP	ENTEROCOCCI	CORYNEBACTERIUM SP.	PASTEUS MIRABILIS	BACTEROIDES SP.	HEMOPHILUS SP.	E. COLI	BACILLUS SP.	PEPTOSTREPTOCOCCUS SP.
1				x	x	x										
2				x				x						x		
3		x		x			x									
4							x									
5				x												x
6				x												x
7			x	x			x	x								
8										x			x			
9		x			x			x								
10				x	x					x						
11				x												
12					x		x						x			
13				x	x					x						
14									x	x						
15			x	x	x				x							
16				x	x				x	x						
17				x			x									
18				x	x											
19					x				x							
20				x			x									
21					x		x		x	x						
22					x		x									
23					x			x				x				
24				x						x						
25			x	x	x											
26	x				x			x								
27				x	x											
28	x						x									
29	x			x												x
30	x			x							x					
31										x						x
32				x												
33															x	
34				x	x		x									
35				x												x
36				x												
37				x	x		x									
38				x												
39		x					x									
40		x							x							
41							x			x						
42		x			x					x						
43			x		x	x										
44				x			x									
45	x			x	x		x									
46			x	x						x						
47			x		x											
48	x			x		x	x									
49				x	x											
50				x	x	x										
Total	8	5	6	32	22	4	17	5	6	12	1	1	2	1	1	5



as the time when a patient is at term. In general, if a cervix admits two fingers and is easily distensible labor is imminent and induction of labor will be easy. However, if the internal os is resistant and gives the impression of a circle of fine wire the cervix is not ready even if fairly well "taken up." Induction of labor in such a case should not be attempted unless there are urgent reasons why the patient should be delivered.

In any of the large series of induced labors published there are a small but appreciable number of cases in which induction failed or in which unhappy complications developed as a result of induction of labor. Generally there is a statement to the effect that "failures and complications were much less common in our more recent cases as we became more expert in judgement and technique." Even if the damaged or lost babies and unnecessary Cesarean sections represent a small percentage of the cases induced, this information is cold comfort to the mothers involved and one might well ask, "is purely elective induction ever justified"?

EXAMINATION OF PATIENT IN LABOR

When labor is well established the obstetrical patient deserves an examination by her obstetrician. Often this is the time when incipient difficulties of labor can be discovered and occasional obstetrical accidents avoided if a pelvic examination is made. The obstetrician who depends upon the obstetrical nurse to follow his patients in labor and who wishes to be called only when delivery is imminent is not practicing obstetrics in the best sense of the term; he is a doctor who delivers babies. Much of the pain and tension experienced by a patient in labor can be alleviated by the knowledge that her obstetrician is nearby and is following her progress closely. No analgesia can take the place of considerate and conscientious care by the obstetrician and most women are willing to accept moderate discomfort in labor if they know they are progressing normally and their labor is being carefully supervised. The first visit by the obstetrician when labor has become established is a very important incident in the management of labor, both for the doctor and the patient. In the present series of 1,000 cases the patients were given a rapid general physical examination and then were prepared by the nurse for pelvic examination by washing the perineum with phisoderm and rinsing the area with merthiolate. If the cervix was four cm or more dilated and the head well in the pelvis the membranes, if intact, were punctured. The examining hand was kept in the vagina as amniotic fluid drained away to be certain that a loop of cord did not slide down beside the presenting part. Artificial rupture of the membranes under these circumstances invariably speeds labor. Fairly frequently one finds the amniotic fluid to contain meconium even though no foetal distress has been detected. If meconium is evacuated with the amniotic fluid it serves as a warning of possible difficulty and the foetal heart sounds are followed more closely than usual. In the present series rupture of the membranes early in labor has been a completely safe procedure and the pelvic examination gives the operator a certain knowledge of the condition of the cervix, nature of the presenting part and, generally, the position. Subsequently rectal examinations generally suffice in following the course of labor but at any time another vaginal examination may be done if information is needed which a rectal examination does not supply. In our experience vaginal examinations have been valuable in the management of labor and the fear of infection as a result of them quite unfounded.

LOW FORCEPS DELIVERY

In the case of a primipara when caput is present (or, if posterior, when the perineum is bulging without caput) a low forceps delivery, generally with episiotomy, is probably the least traumatic manner of extracting a baby when done by an experienced operator. The same is true in the case of many multiparas also. A Pudential block using five cc of Xylocaine on each side will result in a good anesthesia of the perineum and will permit the cutting and repair of an episiotomy as well as the extraction of the baby with very little supplemental general anesthesia. Such a procedure spares the patient from fifteen minutes to an hour of hard labor and by the time the baby is crying lustily the patient is awake and comfortable. Resusitation of the baby is rarely necessary. Anyone who has spent many years in the specialty has the opportunity of observing many women whom he has delivered repeatedly and hence is able to judge the degree of success or failure of his earlier work. I am convinced from my own experience that in most cases a low forceps delivery done well is less traumatic to the primiparous parturient than a spontaneous delivery. Stretching of the lower portion of the birth canal with the patient bearing down with each contraction over a long period of time in the second stage of labor will result in a higher residual relaxation of the pelvic floor than will obtain after a low forceps delivery. Surely forceps delivery with pudential block and light general anesthesia is much easier for the patient than a second stage greatly prolonged by a resistant perineum.

REMOVAL OF THE PLACENTA

By the time the cord has stopped pulsating and is clamped and cut, and a quick physical examination of the baby has been done the placenta will be found to have separated in most parturients. Introduction of two fingers into the vagina often will reveal the placenta incarcerated in the cervical canal. There may be no bleeding to indicate separation because the canal is effectively plugged and a considerable quantity of blood can be accumulating in the uterine cavity without external evidence of the extravasation. If one waits for "spontaneous" delivery of the placenta (manipulating the fundus periodically) the wait may be for a considerable time and an appreciable amount of blood may be lost. When the placenta has separated it should be removed and this can be done manually with ease and with very little discomfort to the patient. If the maneuver is painful or if the cervix has clamped down rigidly about the placenta a few whiffs of gas will cause the cervix to relax and enable the operator to proceed painlessly to release the placenta. If the placenta has not partly or wholly separated within five minutes of the baby's birth it has been detached and removed manually in this series. This is not a formidable procedure and can be done safely with very light anesthesia by an experienced obstetrician. Following removal of the placenta it was inspected carefully, but, in addition, the placental site in the uterus was palpated as a second check that the uterus was completely evacuated. Often from an inspection of the placenta alone one cannot be sure that a fragment has not been retained. Occasionally small fragments of placenta or membrane will be found in the uterus unexpectedly and their removal may obviate subsequent hemorrhage or even currettage in the late puerperium. In the present series there has been no case of hemorrhage due to retained secundies.

The advantages of early removal of the placenta and exploration of the uterine cavity are several. Total blood loss is reduced, the patient is more comfortable sooner, repair can be done with a drier field and the repair is not disrupted by subsequent delivery of the placenta. If excessive bleeding develops sometime after removal of the placenta the operator can determine its etiology more quickly since one major cause of hemorrhage has been eliminated when all of the placenta and membranes have been removed.

Management of labor and delivery employing maneuvers described in this paper involve much more manipulation than is commonly taught to represent "conservative" obstetrics. Yet nothing in the routine described involves operations which cannot be performed by a well trained obstetrician with complete safety to his patients. In the present series there was only one case of puerperal sepsis and one case of phlebitis postpartum. Each responded quickly to therapy and left the hospital within a week after delivery.

Management of labor and delivery as described probably should not be attempted by physicians who only occasionally deliver babies. As in any field of medicine judgements and practices which are routine and easy for the man confining himself to the special field may be hazardous when attempted by a novice. In the field of obstetrics there is a need for redefinition of what constitutes sound, conservative practice and a revision of the content of obstetrical courses taught medical students and house officers to the end that doctors in training may learn the difference between indefensible meddling and desirable manipulation in the management of obstetrical patients. Obstetricians in training should have the opportunity to practice under supervision obstetrical maneuvers which they will use routinely in private practice.

The technical assistance of Miss Josephine Pyle BA MT (ASCP) and Miss Joan Bellavance BA MT (ASCP) in preparing the bacterial cultures is gratefully acknowledged. The expense of the laboratory work has been borne by the Middlesex Hospital.

CRITICAL NOTE BY IRVING FRIEDMAN, M.D.

The fear of vaginal examination in late pregnancy or labor is a curious anachronism in modern obstetrics. It is rooted, no doubt, in Semmelweis' dramatic proof that the medical attendant coming fresh from the morgue or the pest-house to the woman in labor was the carrier of deadly infection. The lesson of those pre-antiseptic days was so well learned that it is now difficult to unlearn the part of it no longer applicable to our times and our new situation. In many hospitals, including the one in which I work, vaginal examination of women in labor is surrounded by the safeguards suitable for major surgery. The examinations are made in the delivery room, after preparation of the patient as for delivery, and the usual surgical scrub. Naturally, they are done only when the delivery room and staff are not occupied with more urgent business. This major-surgery psychology, the inconvenience and time-wasting, subtly discourage such examinations. Timely warning of potential trouble is sometimes lost, and the hazards created far outweigh the risk of vaginal examinations done in bed with no fuss or preparation. I heartily agree with Dr. Crampton on this issue. I personally prefer sterile gloves, now so conveniently available, and I have never seen any harm come from routine office vaginal examination made in the latter weeks of pregnancy. I would do the same in labor if hospital regulations permitted this. I likewise agree with Dr. Crampton's observations on the estimation of a patient's readiness for labor. The occasional multipara found to have a well engaged head and a soft thin cervix several centimeters dilated may have a precipitate delivery, and is more safely managed by elective induction of labor. I have never seen induction to fail in such cases, and in one instance in my experience, the patient delivered 13 minutes after elective induction by artificial rupture of the membranes. This is the sort of patient whom a taxi driver or policeman may deliver for you if you await the spontaneous onset of labor.

My usual procedure differs from Dr. Crampton's in the use of elective low forceps. Most of my patients are delivered spontaneously, with analgesia and local anesthesia only. The hospital where I work has unusually favorable facilities for preparation of mothers for childbirth and support during labor, and such prepared patients often wish to be awake and assist in the expulsion of the infant. They seem to derive great satisfaction from this, and if no obstetrical contraindication arises I conduct their deliveries accordingly. Following delivery of the placenta, the uterine cavity is explored digitally, using a few whiffs of gas for analgesia.

Dr. Crampton's paper is a whiff of fresh air in some musty corners.

You may perceive that I do not recommend the study of mathematics as leading directly to any important discoveries in medicine, but from a persuasion that, besides its subserviency to natural philosophy, it has a tendency to quicken the invention, to open the mind, and to accustom it to a habit of close and accurate reasoning. But let me caution you against entering too deeply into this most bewitching of all studies, which will probably divert your attention from the main ends of your profession. Let me also desire you to guard against its leading you to a disposition to scepticism, and suspense of judgement in subjects that do not admit of mathematical evidence. Remember that habits of nice discrimination, though frequently useful, are sometimes incompatible with the business of common life, and of your own profession.—Dr. John Gregory, Professor of Medicine, Edinburgh, 1772.

CERVICAL-LINGUAL-MASTICATOR MYOCLONUS

A REACTION TO PROCHLORPERAZINE

William F. Eckhardt, Jr., m.d., *New Canaan*

Major or minor extrapyramidal symptoms have been reported in nearly 60 per cent of patients with mental illness given parenteral, daily doses of 60-200 mgm. of prochlorperazine.[1] In general, the reactions are transient, clearing slowly in about a week after cessation of drug therapy. When the mental status of the patients requires that prochlorperazine be continued, the trihexyphenidyl drugs, such as artane, may counter the Parkinsonian symptoms induced.[2] This toxic reaction to the halogenated phenothiazide drugs is well known.

The rare syndrome of acute psychomotor excitement, tremor, myoclonic opisthotonus, dystonic spasms of the face and jaw and oculogyric crises, seen in normal patients who receive low doses of prochlorperazine is not as well known and prompted me to report in detail the following case.

CASE REPORT

A sixteen year old white girl complained of lower abdominal cramps and nausea, occurring two weeks before her next expected menstrual period. Physical examination was normal except for massive obesity. She was emotionally upset by problems at school induced partly by her appearance. Her past health had been excellent. Prochlorperazine (30 mgm. daily in spansule form) was prescribed for her nausea and anxiety.

She took two 30 mgm. capsules on the day of her consultation, and one 30 mgm. capsule the next morning. On the evening of the second day, after having taken 90 mgm. in two doses over a 36 hour period, she noted marked jaw myoclonus, with deviation of her jaw to the right, right cervical muscle spasm with tilting of her head to the right, mild neck pain, inability to speak clearly and swallow because of stiffness of her tongue, and protrusion of her tongue to the right. There was no generalized myoclonus, cog-wheel rigidity or oculogyric signs. Her physical examination was otherwise normal.

She was given 100 mgm. of secobarbital intravenously with immediate, dramatic and permanent disappearance of her myoclonic signs. Prochlorperazine was discontinued and she has had no further myoclonic attacks and has no residuae of her frightening episode.

REVIEW OF REPORTED REACTIONS

Delay and co-workers first described the alarming myoclonic reactions to prochlorperazine which they felt to be fairly characteristic. They noted in their patients predominantly unilateral cervico-lingual-masticator myoclonus, trismus, uncontrolled protrusions of the tongue, torticollis, and lip movements. Although their paper contained no detailed case histories, they were struck by the similarity of these drug induced myoclonic reactions to hysteria and to the rare post-encephalitic parkinsonian reactions described by Thomas in 1921 and Lhermitte in 1928.[3]

Although prochlorperazine has been the offending drug in most of the reactions reported, perphenazine and chlorpromazine have also caused similar reactions. When perphenazine was given to 560 patients of all ages who had various dermatoses by Shannon and co-workers, seven patients, under 23 years of age, developed attacks of neck or facial stiffness or tongue protrusion which ended when the drug was discontinued.[4] Transient tonic spasms of the neck, tongue and pharyngeal muscles have also been seen after chlorpromazine administration but such motor effects must be exceedingly rare.[5]

Although the full blown myoclonic reaction to prochlorperazine administration has been described in detail in only ten previous cases, many other reactions have gone unreported. Delay lists 13 cases of the syndrome as the basis of his report.[3] England and Schwab mention several cases seen at the Massachusetts General Hospital where a tentative diagnosis of tetanus was first made.[2] Hollister listed three patients with the syndrome who were not reported.[6] Christian and Paulson saw two patients who probably had this hypersensitivity to prochlorperazine.[8]

The myoclonic reaction, although readily reversed by intravenous or intramuscular barbiturates, can be a source of utter terror for the afflicted patient and his relatives. Physicians have confused this specific toxic reaction to prochlorperazine with hysteria, tetanus, bulbar polio, hypocalcemia, schizophrenia, strychnine poisoning and basilar artery thrombosis. It is of interest that seven of the 11 cases reported in detail have been women. Whether this be coincidence or a sex-linked difference in central nervous system susceptibility cannot be answered at present. The reaction has been produced by both oral and parenteral prochlorperazine. The smallest oral dose which has caused the reaction, was 90 mgm. given over a two day period in spansule form. The smallest parenteral dose that produced a myoclonic reaction was 40 mgm. given over a three day period.

Although the halogenated phenothiazine drugs are important tranquillizers and anti-emetic drugs, their varied and occasional severe toxic effects fur-

Table I
Tabulation of the Myoclonic Reactions to Prochlorperazine

AUTHOR	AGE OF PATIENT	SEX	REASON FOR PROCHLOR-PERAZINE	DOSE AND ROUTE OF ADMINISTRATION	REACTIONS AND THERAPY
O'Hara 1958 (7)	45	F	Post-op nausea & mood swing	160 mgm. i.m. over a six-day period	Trunk and facial spasm, facial distortions with dislocated jaw and chipped teeth. Sedation (?) ended attack.
	42	F	Mood stabilizing effect post-op	50 mgm. i.m. over two days	Uncontrolled tongue movements, slurred speech. Sedation (?) ended attack.
	26	M	Mood effect, Nausea	40 mgm. parenterally over three days	Facial droop, lip movements, tongue protrusion, wild facial contortions with dislocation of jaw. Given meperidine with gradual effect.
	"	"	2nd admission Nausea	70 mgm. i.m. over three days	Trismus, uncontrolled swallowing and tongue movements, facial grimacing. Sedation (?) ended attack.
	47	F	Nausea	50 mgm. i.m. over two days	Uncontrolled tongue movements, pharyngeal constriction, facial grimacing.
	29	M	Vomiting	170 mgm. over three days. 160 mgm. of dose by mouth	Mute and rigid, carpal spasm.
Christian & Paulson 1958 (8)	20	M	Nausea & vomiting with pneumonia	70 mgm. i.m. over three days	Opisthotonous, dystonia, laryngospasm. 750 mgm. amobarbital i.v. over five minutes ended the attack.
Gailitis, Knowles, & Longobardi 1960 (9)	25	F	Vomiting	80 mgm. over three days, 70 mgm. of the dose by mouth	Four-minute attack of muscle rigidity. Amobarbital (250 mgm.) intravenously ended the attack.
	33	F	Meniere's Syndrome	90 mgm. over two days in oral, spansule form	Neck stiffness, facial contortion. Amobarbital (0.25 gm. i.m. ended the attack.
	22	F	Nausea	40 mgm. over four days, last dose 25 mgm. i.m.	Tongue protrusion, lip twitching, mouth distortion, cyanosis. Meperidine and atropine ended the attack.
	43	F	Nausea	60 mgm. over two days by mouth	Tongue movements, facial contortion. Phenobarbital (130 mgm.) i.m. ended the attack.
This Report	16	F	Nausea & mood effects.	90 mgm. oral spansules over thirty-six hours	Neck stiffness, trismus, tongue and head deviation, Secobarbital (100 mgm. i.v.) immediately ended the attack.

ther emphasizes the need to employ them only where their unique effect is of prime therapeutic importance.

ADDENDUM

Since submission of this manuscript for publication, several other reports have appeared. Hollister has briefly reviewed the complications from psychotherapeutic drugs and has observed cervical-lingual-masticator myoclonus after perphenazine, trifluoperazine and fluphenazine.[10] Waugh and Metts reported a severe myoclonic reaction in a uremic female who had received 90 mgm. of prochlorperazine parenterally over a three day period. Although secobarbital and amobarbital were not used, 120 mgm. of sodium phenobarbital administered intramuscularly was of no value. Their patient responded dramatically to 25 mgm. of diphenhydramine intravenously.[11]

It may be lifesaving to use diphenhydramine in those rare instances where rapidly acting barbiturates prove to be of no benefit in the treatment of these unusual extrapyramidal reactions to phenathiazine drugs.

SUMMARY

1. The eleventh case of cervical-lingual-masticator myoclonus secondary to prochlorperazine administration is reported in detail.

2. A review of the ten prior documented reactions has been presented.

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Editorials

A.M.A.'s 110th Annual Meeting

In this issue of CONNECTICUT MEDICINE will be found a comprehensive outline of the American Medical Association's 110th Annual Meeting in New York City.

Every physician should read this outline carefully in order that he may plan for his attendance at this valuable medical symposium but also to learn, the steps to bring to the attention of his medical organization any matter concerning the practice of medicine which in his opinion calls for organized action.

It is unfortunately true that many physicians do not understand the democratic character of organized medicine and the opportunity which they have to influence the functioning of medical organization.

So accustomed have the people of our country become to having their lives ordered from above, and in spite of the fact that most people resent it, it has become almost instinctive to complain about the failure of the county, state or national segment to do something which in a final analysis, the organization cannot do unless directed to do so by the members of the organization.

It is most important for physicians to realize that the individual member of the American Medical Association has in his power through his county and state societies to initiate and eventually bring about any change which in his opinion is for the benefit of medicine.

D.S.O'C.

Viruses And Cancer

A cancer is defined as an abnormal uncontrolled cellular growth which occurs in all kinds of organisms both animal and plant. It originates in a normal cell which for reasons some known and others unknown suddenly turns cancerous, begins to multiply widely and without any apparent restraint, nevertheless the mutant cancer cell continues to carry some of the traits of the cell of origin. Although the transformation may have more than one kind of cause, it is becoming increasingly important for considering the relationship that exist between viruses and cancer.

Viruses have been implicated in animal cancers ever since Peyton Rous[1] in 1911 transmitted chicken sarcoma from animal to animal by means of a cell-free filtrate. This meant that cancer could be caused by a non-bacterial agent. What could such an agent be? Ultra-filtrates could be a chemical substance emitted from the tumor as well as a virus. In fact until the electron microscope made viruses subject to direct examination, it could not be known that the agent in the Rous's ultra-filtrate was a virus. Since the time when virus visualization and identification became possible we have come to realize that viruses are known to cause cancer or tumors in chickens, pheasants, ducks, mice, frogs, rabbits, deer and many other animals. This fact is of paramount importance to the human cancer problem, even though up to the present time a virus has not been implicated in any case of human cancer.

One of the ideas that has retarded acceptance of the possibility that viruses can have etiologic importance in human cancer is that viruses are infectious agents whereas cancer is considered to be non-infectious. This is not considered to be a valid objection for the following reasons. (a) Viruses may be highly specific, so specific in fact that a given virus may infect and cause disease only in one kind of cell, in one kind of animal and hence under all other conditions appear non-infectious. One such virus is the kidney sarcoma virus of the leopard frog. (b) Many people may be carrying viruses of etiologic importance for cancer which for one reason or another may not have been discovered. In the last few years dozens upon dozens of hitherto unknown viruses have been revealed to be present in human beings. ECHO viruses from the gastrointectinal tract, Adenoviruses from the upper respiratory tract, the group of viruses isolated from human sera and new ones that are being discovered every week. There are now so many that we have no diseases to relate to them. Certainly, there is no lack of viruses to cause us to shy away from considering viruses as a causative agent in cancer. Even if the known and unknown viruses are not demonstrated as etiologic agents in cancer, there is always the possibility that a latent virus may mutate into a new strain that could have etiologic importance. Mutant strains of viruses are now being grown and have become of the utmost importance in protection against poliomyelitis, measles and soon many other virus diseases. Furthermore there are many examples of latent viruses that may remain hidden for a lifetime or even for generations only to come to light as a result of some new treatment or change. The virus of herpes simplex is acquired early in life and then persists throughout life symptomless. Taub has shown that an infection of a mouse colony with lymphocytic choriomeningitis can result in an unapparent infection of all animals and the virus is transmitted in utero remaining with the animal throughout life. The virus can be revived and brought to light by an injection of sterile broth which is then followed by active disease.[1]

(c) Furthermore it has been shown by Bryan and Beard[2] that animal cancer may at one time appear infectious and at another time non-infectious, this being due to the quantity of virus present in the cancer. If large amounts are present it will be infectious and if little virus is present in the tumor it may appear non-infectious. One of the adenoviruses has been found by Huebner[1] to destroy human cancer of the cervix although only temporarily. Perhaps it might be possible to "train" a series of viruses to grow on cancer cells which will destroy them all. This depends upon a method for growing all kinds of human and animal cells in a test tube.

During the past few years such a technique of growing full term human amnion cells is proving of great value. As a result there has been an almost unbelievably rapid development of knowledge from isolation of new viruses. Such experimentation is of the utmost value since one can study human cells and viruses without danger to man. Interesting changes in chromosome numbers, in ability to grow in cortisone or in x-ray treated animals have thus been revealed.

Even if eventually we do not find a cancer virus among a large number of human viruses we must be ever alert to the possibility that some might be incorporated into the genic apparatus (transduction) of some cell and start the cell on a cancer career.[3] There are so many viruses within cells and these viruses are continually passing from person to person, that such an idea is not far-fetched.

Then there is always the possibility that some agent might induce a change of a latent virus into a carcinogenic one. Such inducers have already been shown to change a harmless virus into a fatal one in lysogenic bacteria. And what are these Inducers—X-Ray, ultra-violet light, nitrogen mustard, some chemical reducing agents, iron-chelating agents. These Inducers have a startling resemblance to carcinogenic agents for man and animals.

What we do in the way of experimentation depends in large measure upon what we think. If we think of the possibility that viruses may be related to the nature of cancer, then experiments will more likely be devised to bring more light upon this pressing problem.

One such experiment has just been reported by Myre[4] in a case of carcinoma of the prostate. It supposes that Pseudomonas Aerugenosa with which the patient was infected contains a specific virus which is carcinogenic in one phase for prostate cells and infective or oncolytic in another phase. And so he searched until he found a case of prostatic carcinoma that was infected with Ps Aerugenosa after which the prostatic cancer regressed spontaneously. He isolated the organism, grew it and made a vaccine from it with which he undertook to treat other cases of prostatic carcinoma.

Wolman[5] believes that there is a group of bacterial agents which may well be models for the type of viruses that could be carcinogenic. Under some conditions the viruses are infective, and mutagenic under others, much like the phage of lysogenic bacteria mentioned above. In the prophage state the virus occupies specific sites on the chromosomes, is integrated into the genetic apparatus of the bacteria where they reproduce once from generation to generation, under other conditions they also produce mutations and cause disease.

In one-third of all cases described as leukemic remissions in the literature[6] the remission could be attributed to the presence of purulent infection. Even a higher percentage of apparent cures or remissions of sarcoma and cancer are traceable to concomitant purulent abscesses, pneumonia or erysipelas. Perhaps the bacteria causing the infection contain a specific virus for the particular cancer cell, enters it, cause disease of the cancer cell and its destruction.

It is clear people are beginning to think of the possibility that viruses may be related to the nature of cancer, and are devising experiments to bring more light upon this pressing problem.

L. H. N.

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Objectivity

In the realm of scholarship and education, few words are more abused nowadays than "objectivity." A scholar, we are told, should be "objective"—that is, dispassionate, impartial, and concerned with realities, rather than indulging his prejudices. Such an attitude is desirable enough; but what a good many professors and publishers take for impartiality and concern with the facts sometimes is a curiously inverted subjectivity, an intolerant zeal for "tolerance," a passionate attack on passion, a prejudiced denunciation of bigotry.

In the social studies, for instance, not a few doctors of philosophy call "objectivity" what really is their own ideology. Thus they praise to the skies a book that advocates a positivistic view of man and society; if that book espouses the cause of centralized planning, the omnicompetent state, and the progressive standardizing of all aspects of life, it is "objective"—that is, the book conforms to reality—or what ought to be real. If a book takes another tack, holding by religious conceptions of man and prescriptive opinions of the free and just society—why, the authors of so disagreeable a work must be nasty subjectivists.

A recent instance of this interesting ideological bigotry of self-proclaimed champions of "objectivity" may be found in the virulent criticism of a study called "A Profile of the Aging, U.S.A." This sociological survey was undertaken by two highly reputable sociologists at Emory University, Professors Wiggins and Schoeck. Conducted carefully upon orthodox American social-science principles, this "Profile" dealt with the problems and opinions of the aging very broadly—taking up at some length their religious convictions, for instance. Incidentally, it touched upon their medical needs and economic resources.

Here Dr. Wiggins and Dr. Schoeck bumped into a hornets' nest. For their report suggested that the demand and need of America's aged for governmental subsidies is not very great—not nearly so impelling as certain eminent politicians sentimentally insist. A staff-member of the United States Senate Subcommittee on the Aged and Aging, angered by this mild challenge to political demands for more federal spending, did his best to discredit the "Profile." Gentlemen of similar ideological preferences wrote impassioned letters of denunciation to the *New York Times;* and one national association concerned with social problems promptly proceeded to pass a resolution condemning Professors Wiggins and Schoeck for "misuse of sociological data"—without even bothering to obtain a copy of the "Profile."

Thus in the name of objectivity, as in that of liberty, it is easy enough to commit crimes against reason and justice. Professors Wiggins and Schoeck were cast into the outer darkness because they had ventured to suggest that their scientific survey did not disclose a pressing need to treat elderly Americans as if they all were paupers. And the evangels of the grand planned economy, their eyes wet with sentimental tears for a hypothetical crowd of mendicant old folks, denounced the Emory University scholars for being subjective. With the ideologue, objectivity is all—so long as it is leftward-trending objectivity.

By Russell Kirk, reprinted with permission of the author and of *The University Bookman.*

Sports And Health

The 1960 Olympic Games have come to an end. Among the fascinating sidelights of the world's greatest sports festival have been a number dealing with health.

The great health tragedy of the Olympics was the death of a Danish cyclist after his collapse in the 100-kilometer road race, which was run under a broiling sun. The Danish trainer has now admitted that he gave drugs to all four of the Danish contestants in the race. Three of them collapsed.

The drug Roniacol, which he gave them, is not a so-called "pep" pill. It is a form of nicotinic acid, which is one of the vitamin-B complexes. Roniacol is used to dilate the blood vessels. By so doing it lowers the blood pressure and thereby increases the blood output of the heart, which in turn causes an increased work load on the heart. The stimulating effect of the drug combined with the same effect caused by exercise apparently caused the Danish cyclists to go into shock.

There were many minor health crises during the games. A few days before they were scheduled to begin competition in the swimming events at Stadio del Nuto, twelve Australian swimmers developed conjunctivitis.

The painful eye irritation was believed caused by the chlorine in the water in the swimming pool or by excessive exposure to the bright Italian sun. It did not, however, prevent the Australians from gaining their share of medals in swimming.

FENCES WITH BROKEN HAND

One competitor in the modern pentathlon broke a bone in his hand when he started to whip his horse and hit the saddle by mistake with his right hand. The next day, however, he was back fencing (59 opponents over a 16-hour period without even a break for lunch.'

Health "breaks" were good for some American athletes and bad for others. Jerry Seibert had a temperature of 101 degrees when he ran fourth in the semi-finals of the 800-meter race and was eliminated.

Jeff Farrell, a swimmer, barely made the team because of an emergency appendectomy eight days before the tryouts. In Rome, he earned two gold medals in anchoring both the American medley and 800-meter free-style relay teams in world-record breaking wins.

There are a number of interesting physiological correlations with effective athletic performance. Perhaps the best known of these is the slow pulse rate of many outstanding athletes.

A University of Illinois study found pulse rates of 14 track stars averaged 49 and those of 26 swimmers averaged 65. The normal pulse rate is from 72 to 84.

Low pulse rates are found particularly among long-distance runners, swimmers and other athletes engaging in events requiring endurance.

AN 'ATHLETES' HEART?

There is a popular notion that athletes suffer from "athlete's heart," or cardiac enlargement. This is true for some, but not all, athletes. The heart of Roger Bannister, the British physician who was the first man to run a mile in less than four minutes, is 25 per cent larger than the average. However, at age 60, the heart of Joie Ray, the American runner of four decades ago, was 11.3 per cent smaller than the average.

Dr. Bannister, now a staff member of the National Hospital, London, contends the most important physical factor in a champion athlete is lung diffusion capacity greater than that of the average individual.

Speaking at the annual meeting of the British Medical Association last month, Dr. Bannister said, "muscle, mind and a capacity to take up and utilize oxygen better than the average person are the essentials required for top-notch athletic performance."

"His studies, he reported, showed that increased lung diffusion capacity is more important than muscularity, superhuman cardiac output, or an extra-large vital capacity.

He conceded, however, that unknown factors in an athlete's personality that are not easily influenced by training play an important role in actual performance.

THE WINNING SHAPES

There is a high correlation between morphology, or body build, and athletic performance. Swimmers, weight lifters and discus throwers are usually mesomorphs.

The body build of mesomorphs is characterized by extreme bone and muscular development, a large head, broad shoulders and chest and heavily muscled legs and arms. Hercules is a classic example of the extreme in mesomorphy.

Even within this classification, however, there are differences. Weight lifters and wrestlers are usually short in stature with relatively short limbs while shot putters have long upper arms and a long arm span.

Most of the top runners, jumpers, hurdlers and vaulters are ectomorphs. Their body build is characterized by a thin torso and long, relatively thin arms and legs.

Rafer Johnson, United States gold-medal winner in the grueling decathelon, for example, has the ideal body build for his specialty.

He stands six-foot, three and weighs 196 pounds. Above his 35-inch waist, he is built like a shot putter with a 46-inch chest and a heavily muscled upper torso. His slim legs, however, are those of a sprinter.

About the only area of sports in which endomorphs excel is in long-distance swimming. The extreme in endormorphy approaches the spherical as nearly as is humanly possible. The endomorph has a large abdomen but slender wrists and ankles. His large supply of subcutaneous fat enables him to withstand 24 to 36 hours of exposure to cold water in which normal subjects would succumb after five hours.

For years to come the 1960 Olympics will be relived in articles and discussions for sport fans throughout the world. At the same time serious researchers will be continuing to search for more data on correlation between physiological factors and athletic performance.

They should, however, always bear in mind the observation of Dr. Bannister that the elusive and indefinable factor of personality plays an important role. If this were not true, the 1960 Olympic Games would not have been the stirring, colorful, and dramatic spectacle they turned out to be.

By Howard A. Rusk, M.D. Reprinted with permission of the author and *The New York Times*.

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*
160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

Membership Report Of The Secretary

FAIRFIELD COUNTY			
Membership—January 1, 1960			858
New Members		46	
Less:			
Deaths	13		
Resignations, transfers	9		
Non-payment dues, etc.	5	27	
	—	—	
Net Gain		19	
Membership—December 31, 1960			877
HARTFORD COUNTY			
Membership—January 1, 1960			1008
New Members		51	
Less:			
Deaths	17		
Resignations, transfers	22		
Non-payment dues, etc	9	48	
	—	—	
Net Gain		3	
Membership—December 31, 1960			1011
LITCHFIELD COUNTY			
Membership—January 1, 1960			129
New Members		6	
Less:			
Deaths	2		
Resignations, transfers	4		
Non-payment dues, etc.	0	6	
	—	—	
Net Gain		0	
Membership—December 31, 1960			129
MIDDLESEX COUNTY			
Membership—January 1, 1960			119
New Members		8	
Less:			
Deaths	2		
Resignations, transfers	1		
Non-payment dues, etc.	0	3	
	—	—	
Net Gain		5	
Membership—December 31, 1960			124
NEW HAVEN COUNTY			
Membership—January 1, 1960			889
New Members		48	
Less:			
Deaths	8		
Resignations, transfers	15		
Non-payment dues, etc.	5	28	
	—	—	
Net Gain		20	
Membership—December 31, 1960			909
NEW LONDON COUNTY			
Membership—January 1, 1960			170
New Members		11	
Less:			
Deaths	1		
Resignations, transfers	4		
Non-payment dues, etc.	1	6	
	—	—	
Net Gain		5	
Membership—December 31, 1960			175
TOLLAND COUNTY			
Membership—January 1, 1960			22
New Members		2	
Less:			
Deaths	0		
Resignations, transfers	0		
Non-payment dues, etc.	0	0	
	—	—	
Net Gain		2	
Membership—December 31, 1960			24
WINDHAM COUNTY			
Membership—January 1, 1960			66
New Members		3	
Less:			
Deaths	2		
Resignations, transfers	1		
Non-payment dues, etc.	0	3	
	—	—	
Net Gain		0	
Membership—December 31, 1960			66
ASSOCIATE MEMBERS		13	
New Members		0	
Less Deaths		2	
		—	
Associate Members—December 31, 1960		11	
Total Society Membership—January 1, 1960			3261
New Members			175
			———
Total Membership—December 31, 1960			3436
Less:			
Deaths	45		

Resignations, transfers	56	
Non-payment dues, etc	20	121
Total Society Membership—December 31, 1960		3315
Net Gain For Year	54	

TOTALS

Fairfield	877
Hartford	1011
Litchfield	129
Middlesex	124
New Haven	909
New London	175
Tolland	24
Windham	66
	3315
Associate Members	11
	3326

New Members

FAIRFIELD COUNTY

Gilles G. Allard, Stamford
Francis R. Coughlin, Jr., Stamford
Paul Diamond, Bridgeport
James D. Garrity, Monroe
John A. Gerda, Newtown
L. Donald Homza, Bridgeport
Lucian S. Lapinski, Bridgeport
David H. Lobdell, Bridgeport
Robert L. Madison, Stamford
Winifred McCrann McKenna, Bridgeport
Arthur J. McPadden, Bridgeport
Luis G. Murillo, Greenwich
Henning Poulsen, New Canaan
Arthur G. Prangley, Jr., Greenwich
William D. Wheat, New Canaan

HARTFORD COUNTY

John O. Alden, Hartford
Rodolfo G. Bulaong, East Hartford
Edward J. Casey, Thompsonville
Stuart D. Marsh, South Windsor
Juanita B. Rentsch, Glastonbury
Samuel B. Rentsch, Jr., Glastonbury
Arthur J. Schreier, Hartford
Nicholas J. Seguljic, Bristol
Edward J. Sulick, Manchester

MIDDLESEX COUNTY

Anthony M. Pernetti, Old Saybrook
Albert G. Roberts, Middletown
John J. Sullivan, Jr., Middletown

NEW HAVEN COUNTY

H. Arto Abrahamian, West Haven
Tanash H. Atoynatan, Hartford
Arthur R. Clemett, New Haven
Redento D. Ferranti, Hamden
Saul J. Landau, West Haven
Marvin Levenstein, Hamden
David J. Nelligan, New Haven
James H. Scathiff, New Haven
Delbert B. Smith, New Haven

NEW LONDON COUNTY

Mariano F. Songco, Norwich

CORRECTION

In the published minutes of the Council meetings of March 9 and March 16, 1961 (Connecticut Medicine for April, 1961), the following correction is made by the deletion of the words in parenthesis (), and the insertion of the words in italics:

On page 252, second column, 5th paragraph, the text should read: ". . . These reports showed that seven county associations had voted to approve the Contract (in concept) *and that the Fairfield County Association had accepted the Contract in concept* but had made approval contingent on the Board of Directors of CMS, Inc. complying with certain recommendations."

COUNCIL MEETING

Tuesday, March 28, 1961

A meeting of the Council was held on March 28, 1961, at the Hunt Memorial Building, Hartford. The Chairman called the meeting to order at 1:10 P.M. Present, in addition to the Chairman, were: Drs. Gallivan, Feeney, Goldberg, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Abbot, Bradley, Cornwell, Katzin, Buckley, Rentsch, Murray Jr., Gorman, Ogden, Gevalt, Grant, Davis, Phillips, Purnell. Also present: Dr. Richards. Absent were: Drs. Weise, Sr., Schiavetti, and Chartier.

REPORT ON JOINT MEETING OF CMS-CSMS LIAISON COMMITTEES. Dr. Gallivan, who had served as the acting chairman of the CSMS component at the liaison meeting on March 22, 1961, submitted a report which concluded as follows: "It is my considered opinion . . . that all suggestions, recommendations and provisos with respect to the approvals and acceptances of the proposed CMS Community Contract whch were embodied in the several reports (from county associations and the Committee on Third Party Payments) officially transmitted to the Council of the State Medical Society were thoroughly reviewed and discussed at the March 22, 1961, joint session of the CSMS and CMS Liaison Committees. I believe it is evident from the summaries set forth above in my report that we found no areas of major disagreement on these matters between the two liaison committees."

Copies of a Memorandum from Mr. John Coolidge, President, of CMS, Inc., to Dr. Gilman, Chairman of the Council, were distributed. In the Memorandum, Mr. Coolidge listed essentially the same areas of agreement outlined by Dr. Gallivan and stated that the Board of Directors of CMS, Inc., were in accord with the conclusions reached by the Liaison Committees.

It was VOTED to approve Dr. Gallivan's report, as submitted, and to direct the Chairman to read this report to the House of Delegates prior to informing the House as to the Council's recommendation with respect to the proposed CMS Community Contract.

It was then VOTED that the Council recommend to the House of Delegates approval of the proposed CMS Community Contract, at the Special Meeting of the House called for 2:00 P.M. on March 28, 1961, at the Hunt Memorial Building, Hartford.

On a request from Max Alpert, Chairman of the Committee on Third Party Payments, that a substitute Paragraph 7 be inserted in the previously approved report of that Committee on the proposed CMS Community Contract, it was VOTED to table action on Dr. Alpert's request.

On several matters relating indirectly to the new Contract, there was general agreement that these would be discussed and acted upon at the next meeting of the Council, set for April 12, 1961, at 160 St. Ronan Street, New Haven.

Special Meeting Of The House Of Delegates March 28, 1961

Hunt Memorial Building
Hartford, Conn.

At a Special Meeting of the House of Delegates on March 28, 1961, called for the purpose of completing consideration of the proposed CMS Community Contract, the following action was taken:

"It was VOTED to approve the Community Contract proposed by Connecticut Medical Service, Inc., as amended by the inclusion in the Contract of the recommendations made jointly by the CMS-CSMS Liaison Committees and accepted by the Board of Directors of CMS, Inc., and the Council of the Connecticut State Medical Society."

The recommendations referred to in this action are those made jointly by the Liaison Committees of CMS and the Society, after considering the several recommendations and suggestions made by the constituent county associations at special meetings, and the State Committee on Third Party Payments. These may be summarized as follows:

1. Re: Recommendations of Committee on Third Party Payments

1) In preparing the legal document for the Community Contract the word "payment" will be inserted in lieu of the word "fee" in all instances in the format of the contract in which the word "payment" may be properly used as a synonym for the word "fee".

2) The recommendation of the Committee regarding a specific statement to exclude medical payments for the care of the "well newborn" is accepted.

3) As to the Committee recommendation that the restriction of payments for professional services rendered in "non-profit general hospitals" be amended or modified, the position of the Board of Directors is as follows: It is essential that payments for CMS benefits for hospitalized patients continue to be restricted to those rendered in non-profit general hospitals.

The Board of Directors approves, however, that the following qualifying clause, "Professional services rendered elsewhere than as specified in this contract are payable only at the discretion of the Board of Directors on the unanimous recommendation of the Medical Advisory Committee," be added to either the pertinent article of the subscribing member's contract or in an appropriate section of the Participating Physicians Handbook.

4) For the purposes of the Community Contract, as well as for the Amendment to the Preferred Contract, the definition of prematurity in newborn infants is specified as: "When the newborn weighs five pounds or less at birth."

5) In regard to the recommendation that CMS payments be made directly to all physicians, whether or not they are participating, it is our opinion that the only practical advantage which accrues to physicians who participate in Connecticut Medical Service is that payments for their professional services are made directly to them and the CMS member is notified of the amount and basis for the payment. To enable non-participating physicians to receive payments directly, either as a general policy or by the acceptance of assignment forms signed by the CMS subscribing member, would effectively deprive Participating Physicians of the only practical advantage of participation. It has always been the position of CMS that if the physician wishes to have the practical advantage of direct payment by CMS he should accept the responsibilities of the Participating Physician.

6) As to the recommendation regarding review of the Community Contract, the Board of Directors wishes to make clear that all provisions of all CMS contracts are constantly under review and statistical

control and that, based on paid claim experience, appropriate recommendations are made from time to time to improve the various provisions of the contract. The Board of Directors will be pleased to supplement these continuous reviews in conjunction with the Connecticut State Medical Society at two year intervals or any other mutually agreeable interval.

11. RE: PROPOSALS AND RECOMMENDATIONS FROM THE COUNTY MEDICAL ASSOCIATIONS

Hartford County New Haven County New London County Tolland County	Community Contract approved without proposals or recommendations.

Middlesex County

The Medical Advisory Committee and the Board of Directors of CMS are already on record to proceed with the development of a major medical-type plan as soon as possible after the Community Contract has been made available to the public. Implementation of these actions, however, is contingent upon appropriate legislation being enacted.

Windham County

The differential payments and payment bases for the in-hospital medical care benefits were arrived at after consideration of a wide variety of recommendations. They are considered to be the best compromise that can be arrived at to provide substantial improvement over the present coverage of in-hospital medical care and still keep the membership charges for the Community Contract within reasonable limits.

Litchfield County

A. Refer to 1 (1) above.

B. Refer to Windham County above.

C. If payments were to be made for the non-sick newborn as well as the sick newborn the cost of the benefit would be many times the cost of the benefit proposed for the sick newborn, since *sick* newborn are considered to represent something less than 10% of all newborn infants. In addition, any payment for the care of CMS members who were admittedly not sick would be contrary to the basic principles of the organization.

D. In the opinion of those who have studied the problem over an extended period of time, radiological services in the out-patient departments of hospitals can be satisfactorily underwritten only by the same agency that covers the radiological services for in-patients in the same hospitals.

E. The question of providing payment for surgical assistants has been discussed on many occasions and it has been the decision on each occasion that such payments not be provided in CMS contracts.

F. The distribution of payments between the various sections of professional services is based on the relative incidence of the professional services specified in the sections. In developing new contracts CMS has always dealt equally with the several sections based on the accumulated paid claim experience of past years.

G. The question of coverage of anesthesia by Connecticut Medical Service has been under continuing study for more than eight years. These studies are continuing but no appropriate basis has yet been found whereby anesthesia may be covered by CMS under the existing methods by which anesthesia services are provided in the general hospitals of Connecticut.

Fairfield County

1) Refer to 1 (1).
2) Refer to 1 (2).
3) No objection.
4) Refer to 1 (3).
5) Refer to 1 (4).
6) Refer to Windham County above.
7) Refer to 1 (5).
8) Refer to 1 (6).

In a letter dated April 3, 1961, Mr. John Coolidge, President of CMS, Inc., informed the Society that "We will now proceed in the usual manner to obtain approval (of the Contract) by the Insurance Commissioner of Connecticut."

COUNCIL MEETING

Wednesday, April 12, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman, at 2:00 P.M. on Wednesday, April 12, 1961. Present in addition to the Chairman were: Drs. Gallivan, Feeney, Goldberg, Hess, O'Connor, Caplan, Scully, Abbot, Weise, Sr., Bradley, Cornwell, Buckley, Rentsch, Gorman, Grant, Davis, Chartier. Also present: Drs. Von Glahn, Markley, and Richards. Absent were: Drs. Cullen, Gardner, Katzin, Murray, Jr., Schiavetti, Martin, Gevalt, Phillips, Purnell.

APPROVAL OF MINUTES. The minutes of the Council meetings of March 9, 1961, March 16, 1961, and March 28, 1961, were approved as printed.

COMMITTEE ON REHABILITATION. It was VOTED to accept the resignation of Daniel P. Griffin, Bridgeport, as a member of this Committee, and it was further VOTED to appoint Wilson F. Smith, Hartford, and Francis H. O'Brien, Waterbury, as members of the Committee.

COMMITTEE ON MENTAL HEALTH. Replying to a communication from John Donnelly, Chairman of the Committee, it was VOTED to reaffirm Society support of the principles embodied in Senate Bill 720: A Bill to Create a Privilege of Non-Disclosure for Communications between Patient and Psychiatrist, and to refer House Bills 3698 and 3615 to the Committee on State Legislation for evaluation.

SPECIAL REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS AND INSURANCE. The Chairman announced that he had authorized holding up the publication of the Special Report in Connecticut Medicine, on request of the Trustees of the Group Protective Plan of the Hartford County Medical Association. A lengthy critique of the Report, received from the Trustees of the Hartford Plan, was reviewed briefly and it was VOTED to refer the Special Report back to the Committee, accompanied by the critique, for study and report to the council.

CONNECTICUT CHAPTER OF THE AMERICAN ACADEMY OF GENERAL PRACTICE. Harold D. von Glahn, Old Lyme, and D. Norman Markley, Hartford, joined the Council as liaison representatives of the Connecticut Chapter of the AAGP. They presented some of the aims of their organization with respect to encouraging the education and training of general practitioners and other matters which concern the advancement of general practice in Connecticut. Dr. von Glahn stated that it was the desire of the Connecticut Chapter to form a Section on General Practice of the Society while, at the same time, preserving its identity as a unit of the national AAGP. A discussion of pending legislation involving state-financed scholarships for medical students revealed some conflict of opinion between the legislative committee of the CA-AAGP and the Committee on State Legislation of the CSMS. There was general agreement that this meeting had clarified a number of matters relating to liaison between the Society and unassociated professional groups, and that continuing efforts should be made to coordinate all professional activities in such a way as to redound to the credit and betterment of medicine throughout the country.

OPINION SURVEY REPORTS. Each member of the Council present received a bound copy of the completed Opinion Survey Report submitted by Rogers, Slade and Hill, Consultants. It was VOTED that all copies of this Report be considered permanent copies to be retained at the Society's building as a lending library, for the use of all members of the Council and of the Society.

Acting on several requests and suggestions from Rogers, Slade and Hill, it was VOTED to request the Subcommittee on Opinion Survey to prepare a series of abstracts of the Opinion Survey Report suitable for publication in Connecticut Medicine, submitting same for prior review by the Council.

RESOLUTION FROM NEW HAVEN COUNTY MEDICAL ASSOCIATION RE: HOSPITAL-BED TAX. The following communication from the New Haven County Association was presented:

"The following Resolution on "Hospital-Bed Tax" was approved at the Annual Meeting of the New Haven County Medical Association held on March 23, 1961:

RESOLVED: That the New Haven County Medical Association is unalterably opposed to the payment of money to any hospital in this County by any member of this Association for the purpose of obtaining or retaining an appointment on its staff; or for the purpose of getting his patients admitted to said hospital; and be it further

RESOLVED: That the above Resolution be forwarded to the Council of the Connecticut State Medical Society for consideration and action."

After some discussion, it was VOTED to refer the New Haven County Association's Resolution to the Committee on Hospitals for study and report to the Council, and to request the Committee on Hospitals to complete its study and file its report at the earliest date possible.

CONNECTICUT LICENSED PRACTICAL NURSES ASSOCIATION. At the request of Mrs. P. Percheron, Executive Secretary of the Connecticut L.P.N. Association, it was VOTED to direct the Chairman to recommend the names of three members of the Society as candidates for service on the Advisory Board of that Association.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to accept the resignation of Joseph L. Hetzel, Waterbury, as a member of this committee.

RESOLUTION OF THE NEBRASKA STATE MEDICAL ASSOCIATION. A Resolution of the House of Delegates of the Nebraska State Association was received as information. The Resolution pertains to projected AMA dues increases and sets certain contigencies upon approval of such increases by the AMA House of Delegates. The contingencies relate to an augmented public information program by AMA.

COMMITTEE ON INDUSTRIAL HEALTH. Acting on a request of this Committee for authorization to print and distribute 3,400 copies of "Guiding Principles Relating to Occupational Medicine" to members of the Society, it was VOTED to return this request to the Committee with the recommendation that the "Guiding Principles" be compared with the 1960 AMA Handbook on Industrial Medicine before making the requested distribution. The General Manager was directed to obtain 50 copies of the 1960 AMA Handbook for use by the Committee in making this recommended comparison.

CONNECTICUT MEDICAL SERVICE, INC. The Chairman read the following communication from Mr. John Coolidge, President of CMS, Inc., "It was a pleasure indeed to receive your letter of March 29 advising that the House of Delegates of the Connecticut State Medical Society at their meeting held on March 28, 1961 unanimously approved the Community Contract, as amended by the inclusion of the recommendations by the Joint Liaison Committees and by the Medical Society Council and the Board of Directors of CMS, Inc.

We will now proceed in the usual manner to obtain the approval of the Insurance Commissioner of Connecticut."

Dr. Buckley reported on a meeting of the CMS Board of Directors, held on April 10th, at which an official position was developed by the Board with respect to SB 1151, heard before the Joint Insurance Committee on April 11th. The General Manager described the atmosphere of the hearing, as outlined to him by a representative of another organization, noting that apparently there had been little if any support for the Bill but that a number of statements had been filed in opposition. SB 1151 would authorize the Governor to appoint four additional directors to the CMS Board, while assuring that fifty percent of the Directors would be members of the Connecticut State Medical Society.

During the course of this discussion, Dr. Gallivan brought to the attention of the Council a number of editorial comments and news items appearing in the Hartford Times and elsewhere which he felt had emphasized that the Insurance Commissioner had made certain demands on the Board of Directors of CMS, but that somehow the Society's actions in approving the Community Contract and in cooperating closely with the Board of Directors to develop a better plan for Connecticut people had been largely ignored by the press. Many Council members agreed with Dr. Gallivan's observations, feeling that the contribution of physicians to the successful operation of CMS, the true nature of service benefits, etc., had never been made a matter of public knowledge and that for these reasons, among others, the true image of the Society and of the Connecticut medical profession was being repeatedly distorted.

There was general agreement that improvement of the mutual public relations aspects of CMS and the Society could best be accomplished as a joint effort of both organizations, and it was VOTED to direct the Chairman to seek an early meeting of the Liaison Committees for the purpose of developing a better joint public relations program.

LEGISLATIVE REPORT. A number of legislative activities of the Society were reported on, especially regarding the statement filed at the hearing on House Joint Resolution No. 45, memorializing Congress to enact aged health care through Social Security, and also reports that one segment of the General Assembly was planning to draft and submit specific legislation which would implement the Kerr-Mills Bill in the State.

It was VOTED to authorize Dr. Feeney and members of his Committee to implement the Kerr-Mills Bill in Connecticut to offer assistance and advice to members of the Committee on Public Welfare and Humane Institutions and other members of the General Assembly who might be interested in the views of the Society on this matter.

AMA LEGISLATIVE CONFERENCE ON THE KERR-MILLS BILL. Dr. Weise reported that he, Dr. Feeney and Dr. Mills had attended this conference and felt they had learned a great deal from it. He had prepared a summary of the proceedings which he said was too long and detailed for presentation to the Council at this meeting, and it was VOTED to reproduce Dr. Weise's report and distribute mimeographed copies to all members of the Council and members of the House of Delegates.

It was further VOTED to direct the Chairman to communicate with county presidents and secretaries, recommending to them that they set up or expand existing legislative committees of not less than eight members which, in cooperation with county woman's auxiliaries, would serve to:

a. Promptly transmit current information on state and national legislative matters to doctors, doctors' wives, local allied agencies and others in their county communities, and

b. Attempt to have informed members available on call to appear at important hearings at the General Assembly, upon notification from the State Committees on Legislation.

AMA LEGISLATIVE ADVERTISEMENTS. The American Medical Association is making plans to run part or full-page public messages as paid advertisements in a number of key newspapers throughout the country later in April. The title of these messages will be "Medical Aid for the Aged." It was brought to the attention of the Council that the Connecticut area was not included in these plans of AMA, and the question was raised as to whether the Society, in cooperation with the county associations, would or could participate in this program within the State. After some discussion, it was VOTED not to undertake legislative activity, on a paid advertising basis, at this time for this purpose.

COMMITTEE TO IMPLEMENT HOUSE OF DELEGATES RESOLUTION ON HOSPITAL ACCREDITATION. It had been suggested by James R. Cullen, Hartford, Chairman of this Committee, that Dr. Leland McKittrick of Boston, of the AMA Council on Medical Education, be invited to address the House of Delegates on April 25, 1961 relative to the questions raised by the House of Delegates on December 6, 1960 in adopting this Resolution. It was VOTED to request Dr. Cullen to report to the House on this matter, rather than to invite Dr. McKittrick.

WNHC (NEW HAVEN) RADIO PROGRAM "CONTROVERSY." Pursuant to the action taken at the Council meeting of March 16, 1961, it was VOTED to designate John N. Gallivan, Hartford, to participate in the "Controversy" program titled: Socialized Medicine, and Thomas M. Feeney, Hartford, to participate in the program titled: Health Care of the Aged.

REFUND OF DUES FOR A DECEASED MEMBER. It was VOTED to refund 1961 Society dues on a pro rata basis for Hugh B. O'Donnell, Milford, deceased March 12, 1961, and to recommend to the New Haven County Medical Association and the AMA that similar action be taken. Examination of the membership files revealed subsequently that Dr. O'Donnell's 1961 dues, in full, had already been returned to his widow.

DATE OF NEXT MEETING. It was VOTED to hold the next meeting of the Council on Thursday May 4, 1961. This will be the organizational meeting, following the House of Delegates meeting on April 25, 1961.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following:

Robert M. Webster, M.D., Age 41 — M.D. Dalhousie Medical School, Halifax, N.S. 1952. Specialty — Pathology. Interested in position as Director of Laboratories.

Noel H. Miller, M.D., Age 34 — M.D. Tufts Medical 1956. Interested in association with another surgeon.

Carlos B. Silveti, M.D., Age 33 — M.D. Univ. St. Francis Xavier, Bolivia 1954. Interested in Pediatrics.

PLACEMENT OPPORTUNITIES

Office space available in Medical Building, New Haven County.

Wanted — House Residents, June 1st in hospital.

Wanted — Physician for internal medicine to take over practice in New London County.

Wanted a young psychiatrist as an associate in the practice of general psychiatry.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

1961 MEETINGS

May 3 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Veterans Administration Hospital, West Haven, 2:00-5:00 P. M.

May 17 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Forest Hills Guest Home, 462 Derby Avenue, West Haven, 2:00-5:00 P.M.

May 24 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Masonic Hospital and Home for the Aged, Wallingford, 2:00-5:00 P. M.

May 31 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Montowese Convalescent Hospital, 163 Quinnipiac Avenue, North Haven, 2:00-5:00 P. M.

June 7 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Cedarcrest Chronic Disease Hospital, Newington, 2:00-5:00 P. M.

June 14 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Masonic Hospital and Home for the Aged, 2:00-5:00 P. M. Dinner meeting: 6:30 P. M.

June 26-30 — Annual Meeting, American Medical Association, New York City.

October 19 — Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30 — Clinical Meeting, American Medical Association, Denver.

unsurpassed "general-purpose" steroid outstanding for "special-purpose" therapy
Aristocort®

in allergic respiratory disorders

Aristocort®

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UNSURPASSED "GENERAL-PURPOSE" STEROID
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ARISTOCORT Triamcinolone has long since proved its *unsurpassed efficacy and relative safety* in treating allergic respiratory disorders, including bronchial asthma. Clinical evidence has now shown that ARISTOCORT is also highly valuable for "special-problem" patients – asthmatic and others – who, because of certain complications, were hitherto considered poor candidates for corticosteroids.

for example:

PATIENTS WITH IMPENDING CARDIAC DECOMPENSATION

In contrast to most of its congeners, ARISTOCORT is not contraindicated when edema is present or when cardiac decompensation impends.[1]

PATIENTS WITH EMOTIONAL AND NERVOUS DISORDERS

Triamcinolone did not produce psychic disturbances or insomnia.[2]

PATIENTS WHOSE APPETITES SHOULD NOT BE STIMULATED

Among patients treated with ARISTOCORT, there was less appetite stimulation, especially in those who had previously gained weight on long-term therapy with other steroids.[3]

PATIENTS WITH HYPERTENSION

There was no blood pressure increase in any patient treated for bronchial asthma, and in some, blood pressure fell. Of these, three had been hypertensive.[4]

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1. McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958.
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3. Friedlaender, S., and Friedlaender, A. S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958.
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Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. In the treatment of allergic respiratory disorders, dosage should be individualized and kept at the lowest level needed to control symptoms. Dosage should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

Supplied: Scored tablets—1 mg. (yellow); 2 mg. (pink); 4 mg. (white); 16 mg. (white).
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Special Article

SOME PSYCHOLOGICAL ASPECTS OF THERAPY WITH DRUGS

WILLIAM KAUFMAN, M.D., *Bridgeport*

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SUMMARY

PART I

Every medication has in addition to its pharmacologic action, a potential psychosomatic effect, either favorable or adverse, depending on the emotional meaning of the *symbol of medication* to the patient. Often by properly conditioning a patient's emotional reactions to the *symbol of medication*, a doctor may be able to provide his patient with total benefits exceeding those anticipated from the pharmacologic action of the drug alone.

INTRODUCTION

This paper discusses drugs, patients, diseases and doctors in the context of some of their most fundamental interrelationships.[48,58]

In the everyday practice of medicine, the answers to the following questions are of considerable importance:

a) How can a doctor provide his patient with maximum benefits from medications through psychological means?

b) How does the patient's psychosomatic state at the time medication is administered alter the expected pharmacologic action of the drug?

c) How do the patient's personality, set of mind, goal direction and basic illness affect his ability to cooperate with the doctor in carrying out a therapeutic program?

d) How do the doctor's attitudes toward medical practice and patients influence the course of therapy with drugs?

In this paper, I will try to give some answers to these questions.

DEFINITION OF DRUGS

A drug is usually administered to improve health in some respect, although it may be used solely for research or diagnostic purposes.

In accordance with modern usage, a drug is any chemical—regardless of its origin and physical state—which upon proper administration alters in some useful way the function and, at times, the structure of some part of the body. Although drugs are prescribed primarily for their pharmacodynamic action,[11,21] the above definition purposely does not distinguish between symbolic and pharmacodynamic properties, since either may alter the function, and at times the structure of some part of the body, as well as influencing the psychosomatic behavior, sense of well-being, set of mind and health of the patient.

THE PLACEBO AS SYMBOLIC MEDICATION

Every medication has a symbolic meaning and a potential psychological effect in addition to whatever pharmacodynamic action it may have.[25,26] The psychological responses of patients to the symbol of medication are often of considerable magnitude and may mimic both pharmacologic reactions and adverse side effects and idiosyncratic reactions to drugs. The best way of studying a patient's reaction to the symbol of medication is through his response to the placebo, a pharmacologically inert substance.

One medical dictionary defines the placebo as a make-believe medication given to please or to gratify the patient. Although the etymologic root of the word is "placere," to please, there are many reasons why I believe this term should not be used.

As far as the patient is concerned, a placebo is not a make-believe medication. In fact, if he learns that a medicine he is taking is pharmacologically inert, then no matter how much it benefited him in the past, it immediately loses its "medicinal" value. Even worse, it may adversely affect his relationship with the doctor who prescribed or administered it, and make it difficult for him to trust other doctors in the future.

Furthermore, the use of a placebo may not necessarily please either patient or doctor. For example, even though the doctor prescribes an "inert" material, a patient may experience an adverse psychosomatic reaction to it of great intensity and duration if he unconsciously believes it is a potent and threatening medication which might rob him of his sex powers or weaken him in other ways. On the other hand, a pharmacologically inert material may sometimes cause a major allergic reaction if the patient is extremely allergic to some "inert" ingredient of the medication. These adverse responses to a placebo certainly do not please either patient or doctor.

Moreover, the idea of placebos has come to have unethical overtones. Many thoughtful physicians believe that the placebo is used solely to deceive, and that even if the patient benefits temporarily from its use, the doctor has been guilty of disgraceful, dishonest, fraudulent and unethical practice. As a result, many doctors using placebos experience a sense of guilt and considerable anxiety, and fear that the deception entailed in the use of the placebo will be discovered by the patient.[7,12,37]

Some think the use of a placebo is unethical even in the experimental design of a study intended to uncover the possible value of new drugs as potent psychopharmacologic agents. For example, if very sick psychiatric patients are chosen as part of an experimental group used to study the effect of a new drug on mental disease, those patients used as controls who receive only placebos continue in their uncontrolled toilet habits, in their acting out of destructive feelings toward people and property, and in other forms of undesirable psychotic behavior. Since effective remedies already exist for such psychotic diseases, it is both demoralizing and harmful to allow a seriously mentally ill patient to continue with his psychotic behavior unchecked; and the practice of using placebos in control patients is thought to be unethical because it deliberately withholds useful, needed therapy with easily available medications.[56] From a medicolegal viewpoint also, the deception entailed in using placebos is looked upon askance.

Some doctors misguidedly use the placebo as a diagnostic weapon to show that the patient's illness is not a "real" one. If the patient says he feels better with the make-believe medication, the doctor feels that this proves the patient was basically healthy, but malingering. Having decided that the illness was imaginary or a deliberate fabrication, the next step unfortunately may be the unmasking of the patient, sometimes in the presence of his family. And the doctor feels that by exposing the patient, he has achieved the ultimate in therapy. Whatever sadistic satisfaction he may have from this procedure, it often causes a serious deterioration in the patient-doctor relationship, and even worse, may cause the patient to develop new and more serious psychosomatic symptoms, including severe depression.

The doctor who becomes angry because his patient reports relief of symptoms when a placebo is administered should remember that, as Beecher has shown in his careful studies, using the placebo alone, even post-operative pain is satisfactorily controlled in about 14 per cent of patients. The surgery inflicts "real" trauma; the associated post-operative pain is "real," and the relief that these patients get from post-operative pain from the use of placebos is "real" too.[2,3] Thus, a person's favorable response to a placebo does not necessarily prove that his discomfort was primarily psychic in origin, although the relief of pain occurred through a psychological mechanism. It has been found that intelligent and non-intelligent, neurotic and non-neurotic patients may react either favorably or unfavorably to administration of placebos. Thus, the fact that someone is a placebo reactor *per se* does not mean that he is either unintelligent or neurotic, as some doctors mistakenly believe.

Properly used, the placebo has always been a valuable medication.[15,18,19,24,42,54,58] I suggest that a good many semantic, transactional and even ethical problems might not arise if the term "placebo" were supplanted by "symbolic medication." This would put proper emphasis semantically and operationally on the correct function in medical practice of the "placebo" of today. When a placebo or symbolic medication is properly used, it is a form of short-term psychotherapy. In fact, a carefully designed and performed study showed that in the relief of many symptoms the efficacy of properly used placebos and short-term psychotherapy was remarkably similar.[17,19]

When a doctor prescribes a symbolic medication (or, for that matter, any medication), in effect he is saying to his patient: "I will take care of you." The symbolic medication is a complex psychological cue which to the patient means that his doctor acting in good faith is providing the wisdom, emotional support and the healing substance that will make him well. Thus, the inert medication is a symbol to him of the doctor's intent to help. The effectiveness of symbolic medication is often greatly enhanced when the doctor says with conviction: "This medication has helped many of my patients; I feel sure it will help you." The patient's short-term response to the psychological cue of the symbolic medication may be (a) beneficial, (b) adverse, (c) both beneficial and adverse, or (d) he may have no response.

Beneficial Effects. When a patient experiences a favorable reaction to symbolic medication, it really expresses his basic hope that he can become well. The beneficial values of a specific symbolic medication usually are short-lived. Its psychotherapeutic value may be re-enforced from time to time by the doctor's continuing suggestion that the medication is potent and beneficial. Sometimes as the effect of one symbolic medication wanes, the substitution of another one restores the benefits the patient anticipated from medicines. The driving force which makes the symbolic medication effective includes his strong belief in his own capacity to get well, in the therapeutic virtue of the inert material, in his doctor as a healer, and the equally strong wish to reduce his own ill health to the maximal possible extent. In addition, he may wish to please his doctor by being able to report improvements in health resulting from therapy, and thereby to obtain praise, approval and affection from the doctor. Sometimes a given symbolic medication may be beneficial to a patient for as long as several decades.

One important use of symbolic medication is that it may help a patient feel that no time is being wasted in helping him get well while various clinical and laboratory studies are being done to discover the cause of his illness. Another important use is as a substitute for potent pharmacodynamic agents which he has been taking and may not have needed at all. Or, used in conjunction with potent drugs, the symbolic medication may reduce the amount of the potent drug needed to keep the patient comfortable. Sometimes even when a disease is unremitting or progressive, the patient may continue to have some beneficial effects temporarily, each time a new symbolic medication is introduced, because he still hopes that somehow his doctor will be able to cure him.

Of course, any substance used as symbolic medication should not cause any pharmacodynamic, toxic, allergic or idiosyncratic effect in a healthy or sick human being. The ideal symbolic medication should cause only psychologic and psychosomatic effects which are determined by (a) the suggestion the physician gives the patient regarding the efficacy of the medication, and (b) the patient's past and present conditioning to medications, doctors, sickness, and his goal direction.

While some individuals are more likely to have a beneficial response to symbolic medications than others, some do not respond at all. It is important to know that in an analysis of 15 independent studies of the effects of symbolic medications on a wide variety of symptoms existing in a total of 1,082 patients, symbolic medications were found to have an effectiveness of 35.2 ± 2.2 per cent. This is one reason why symbolic medication used as a tool for scientific research helps the investigator discover whether or not the drug used in the double-blind study (or any of its variables) is equally effective, more effective or less effective than the symbolic medication.[2,3,13,33,45,50,55,61]

Often a doctor mistakenly attributes beneficial reactions to the pharmacologic action of certain drugs, rather than to their symbolic action. This is especially true when he prescribes pharmacodynamic agents in such small doses that they cannot have clinically significant pharmacologic effects.

In general, symbolic medication ceases to be beneficial when (a) the fact is exposed that it is an inert material, (b) the doctor loses his enthusiasm for the treatment, (c) the patient's illness worsens, causing him more pain and discomfort, despite the fact that he has continued to take the symbolic medication, or (d) the patient develops strong negative transference to the doctor for any reason whatsoever.

Adverse reactions to symbolic medication. Although a symbolic medication may provide such benefits as relief of pain and discomfort, increased sense of well-being and improved appetite and strength, in some people it may elicit adverse psychosomatic effects, particularly if the symbol of medication or the prospect of cure offer a serious threat to the patient's emotional security.[20, 45, 61, 62] The adverse symptoms he has upon taking the symbolic medication may include: dry mouth, nausea, vomiting, sensations of heaviness, drowsiness, difficulty in concentrating, faintness, dizziness, fatigue, hives, dermatitis, gastro-intestinal cramps, diarrhea, increased sweating, palpitation, tachycardia, stuffiness of the nose, impotence, and musculoskeletal discomfort.

Symbolic medications usually produce adverse symptoms in about 15 per cent of patients, although in some clinical studies a symptom such as drowsiness may occur in as many as 50 per cent of patients given these medications. Sometimes it is difficult to differentiate such adverse symptoms from those of drug allergy, idiosyncrasy or intolerance.[2, 3, 60, 62]

If the patient receiving a symbolic medication (or potent pharmacodynamic agent) unconsciously desires no improvement in his health, then the doctor is his enemy, the drug a symbol of personal danger. He may resist treatment by not getting his prescription filled; or if he gets it filled, by not taking it as ordered; or, he may throw it away. If his spouse forces him to take the medicine, even if it is only a symbolic medication, he will almost immediately feel "worse." His adverse psychosomatic reactions usually represent an admixture of protest, resentment, fear, anxiety and the riddance reaction. This patient is likely to blame the doctor and drugs for the new symptoms or intensification of the original illness.

Mixed beneficial and adverse reactions to symbolic medication. Some patients experience both beneficial and adverse reactions to the administration of symbolic medication. For example, a patient may have relief of cardiospasm but at the same time feel drowsy. There are a number of reasons for this. He may have ambivalent feelings about regaining his health: he may want to regain his health, but on the other hand, he may not be able to function in his family, social or occupational milieu without the secondary gains he receives from being sick. The symbolic medication may relieve him of some symptoms and at the same time cause others less troublesome, from which he can still derive secondary gains. Other patients who experience some beneficial effects from symbolic medication feel that anything which eradicates symptoms must be "too strong," and they develop such symptoms as dizziness, fatigue and loss of strength, including sometimes a loss of sex power.

No response to symbolic medication. Some individuals fail to have any response to the psychological cue of symbolic medication, whether this is prescribed or administered by the doctor. Some of these people are normal emotionally, others are neurotic, and still others are psychotic. In a study in which a symbolic pain reliever was administered, 14 per cent of patients had consistent relief; 55 per cent sometimes had relief; and 31 per cent never had relief from its use.

The "pharmacology" of symbolic medications. The administration of symbolic medication may cause subjective and objective effects which resemble those of potent pharmacodynamic agents in important respects. For example, in a study of post-partum women, the time-effect curve of a single dose of symbolic pain-reliever resembled that of aspirin. When a symbolic pain reliever was administered to women with the most severe grades of pain, 21 per cent had complete relief at some point during the three hours immediately following its use; of those who had slight to moderate pain, 57 per cent had complete relief from pain at some point during the post-administration of a symbolic pain-reliever.[35]

In another group of patients, repeated administration of a symbolic medication progressively increased appetite and pep for the week of its use, and the effect resembled the cumulative action of a potent pharmacodynamic agent. Within two weeks after stopping the symbolic medication, these patients had diminution of appetite and pep.

These findings suggest that in response to administration of symbolic medication one might expect to find "peak effects," "cumulative effects," and "persistence of benefits."[2, 3, 34, 35, 36, 60] These characteristics resemble to a considerable degree the characteristics of potent pharmacodynamic agents. Other studies have shown that symbolic medications may influence blood pressure readings, gastro-intestinal motility and secretory power, and muscle tension, in a manner which suggests that a potent pharmacodynamic agent is at work.

Potent pharmacodynamic agent as symbolic medication. Whenever a patient receives any potent pharmacologic agent as medication, the apparent effect represents a summation of the patient's reaction (a) to the symbol of medication,

(b) to the pharmacodynamic properties of the drug,[11,21] and—should these occur—(c) to toxic, histamine-releasing, idiosyncratic or allergic drug reactions.[39,44,49]

The symbolic and pharmacodynamic effects of a drug are not always independent variables. For example, if a patient is not prepared emotionally in advance by his doctor for such side effects as drying of the mouth or blurring of vision which may accompany full doses of atropine, he may react secondarily in an adverse way to the symbol of medication, and may have anxiety, worry or even a severe panic reaction. However well the atropine may relieve his pylorospasm, his adverse emotional reaction to side effects of the drug, which in turn is transferred to the symbol of medication, may be so severe that he will refuse to continue its use, even if the doctor explains belatedly the nature of the side effects.

Emotional factors modifying action of pharmacodynamic agents. The patient's emotional state at the time a drug is administered may determine the kind of response he has. His conscious and unconscious attitudes toward his doctor, medicine and disease; his susceptibility to suggestion; purpose in seeking medical treatment; the frequency of his visits with the doctor; the kind of medical attention he receives during therapy; the route of administration of the drug; the financial expense of treatment—all may help determine the direction, extent, duration and intensity of the psychosomatic effects engendered by the symbol of medication. In addition, the physical properties of medication may help determine its psychological value. To some patients, a bitter medicine is a powerful one. Some believe that liquid medication is superior to pills. A woman may feel that estrogen given by injection is superior to that given orally, even when control vaginal smears show that the estrogenic effects of oral and parenteral estrogen therapy in her treatment were identical.

The cost of a drug may have a bearing on the patient's emotional response to therapy. A patient with heart disease may mistakenly believe that the more expensive of two U.S.P. preparations of powdered digitalis leaf was the only one that did him any good—despite the fact that objectively his cardiac symptoms were equally well controlled by either preparation.

Occasionally a patient may insist that a certain drug has not benefited him, even when objectively he is much improved. Eventually the fact comes out that the same drug had been prescribed previously by a doctor to whom he had formed a strong negative transference. Here, if the patient needs to continue with the medicine, it is necessary to change to another brand. When this is done, he may admit for the first time that he feels improved.

Suggestion, too, may modify the expected pharmacologic effect of a drug. Consider the well-known effect of syrup of ipecac in so-called emetic doses. When it was suggested to a 28-year-old woman who suffered from severe nausea and vomiting of pregnancy that a 10 cc. dose of syrup of ipecac would abolish her nausea, it did so within 20 minutes, and the nausea did not recur until the following day.[60]

Even in an infant, the emotional state may markedly modify the response one might expect from the use of a potent drug.[14] For example, it is well known that administration of histamine by injection in adequate doses will induce gastric secretion of hydrochloric acid in those individuals capable of responding to it. Many mistakenly assume that the amount of hydrochloric acid secreted is related only to the dose of histamine used, and is independent of the emotional state of the individual who receives it. In this instance, the administration of histamine to an infant who was emotionally depressed and withdrawn from familiar persons in her environment stimulated no secretion, or very little secretion of hydrochloric acid. Yet when this same infant was happy, relaxed and emotionally outflowing, histamine produced a copious flow of hydrochloric acid.

Studies in adults indicate that when a patient is resentful, angry and hostile, certain medications used in average doses may not be effective. For example, the administration of atropine to a hostile patient may fail to provide the anticipated pharmacologic effect on motor or secretory activity of the gastro-intestinal tract.[60] Thus, often it may be more important to correct a patient's aberrant emotional reactions through psychotherapy than it is either to increase the dose of medication he is receiving, or to introduce a new potent pharmacodynamic agent into his therapy.

These observations do not mean that the action of every drug can be modified by psychogenic means; e.g., digitalis seems to be just as effective pharmacologically in a hostile or emotionally disturbed patient as it is in the individual who is relaxed and has a friendly attitude toward his doctor. But the emotionally disturbed patient may experience the beneficial pharmacologic effects of digitalis and at the same time have adverse psychosomatic symptoms as a response to the symbol of medication, whereas the emotionally relaxed patient tends to experience only beneficial psychosomatic reactions to the symbol of medication.

(*This is the first of a series of four articles. The references will be published with the last article.*)

Clinical Medicine

CONNECTICUT'S MEDICAL PROFESSION PLAYS ITS PART IN PROMOTING THE HEALTH OF THE SCHOOL-AGE CHILD

Martha L. Clifford, M.D.,* *Hartford*

PART I

Fitness and Athletic Injuries — As Considered By a National Conference on Physicians and Schools.

The National Conference on Physicians and Schools is an outstanding educational project of the American Medical Association which shows the medical profession taking the leadership step in encouraging closer relationships with the education profession for the health of school children. The 1957 Conference was on Fitness and placed emphasis on the contribution of school health and physical education programs including athletics. At the 1959 biennial conference, topics discussed included: National Norms for Fitness, Time for Teaching Health and Physical Education, Are Periodic Health Examinations of School Children Worth While? Standards of Study for Health Education, Classification of Pupils for Physical Education, and Problems in Communication in Health Education. The American Medical Association publishes full reports of its National Conference on Physicians and Schools. All seven conferences held biennially in Highland Park, Illinois, have proven to be a valuable public relations program in bringing together physicians, public health personnel, and school authorities. Ruth V. Byler, Ed. D., Consultant in Health and Physical Education of the Connecticut State Department of Education, who is also a member of the Connecticut State Medical Society's Advisory Committee on School Health to the Committee on Public Health, attended the Seventh National Conference on Physicians and Schools. The writer represented the Connecticut State Medical Society at the Sixth and Seventh National Conferences on Physicians and Schools.

Many state medical societies have patterned their statewide conferences on physicians and schools after that of the national conferences. Connecticut has held conferences in 1955 and 1957. (In 1959, a third Connecticut conference was planned for physicians and schools and was held in the spring of 1960, on prevention of athletic injuries.)

The problem of athletic injuries is recognized as an important one.† Studies of typical injuries have been made. At the 1957 National Conference, John L. Reichert, M.D., Assistant Professor of Pediatrics at Northwestern University Medical School, spoke of his findings of a survey of the literature on the topic of "Competitive Sports Before the Teens."‡ Competitive sports as sometimes conducted are open to criticism. Following are some excerpts from a published article by Dr. Reichert:

"It is generally agreed that the younger and greener the boy, the greater the probability and extent of the injury. We can therefore expect more trouble among the younger group.

"There is good evidence that sustained and violent exercise can throw a damaging load on kidneys, lungs, heart and brain. Such damage may become manifest weeks or even years after the injury.

"Adolescent and preadolescent children are at a vulnerable age. They are particularly susceptible to joint dislocations and injuries involving the growing portions of bones.

"Much of the injury, both physical and emotional, could be avoided if the opponents were equally matched. Many studies have shown that during early adolescence two children of the same age can vary in height by as much as a foot, and in weight by as much as 50 pounds. There is also, of course, a great difference in strength between these two extremes. Moreover, two 12-year-old boys who are well matched as to height and weight may be years apart in their physical development and stamina and, perhaps more important, in the maturity of their judgment. The immature boy is no match for his more mature oponent. Not only is he more likely to lose, but he can be badly injured in the process. Imagine, then, the fallacy of pitting two boys against each other in athletic competition merely because they are the same age or in the same grade at school. But it is done."

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* *Director, Community Health Division, Connecticut State Department of Health.*

Connecticut State Medical Society invited and sent Dr. Clifford to represent the society at the Sixth and Seventh National Conferences on Physicians and Schools.

† (Data issued by the American Football Coaches Association showed that during 1955-59, 51 of 81 deaths directly associated with football were among high school players. *Statistical Bulletin*, Metropolitan Life Insurance Company, May 1960.)

‡ Reichert, John Lester, M.D.: Competitive Sports Before the Teens. Reprinted from *Today's Health*, October 1957.

Dr. Reichert's recommendation is that children in preadolescent and early teen ages should not participate in highly competitive sports of the high pressure "varsity" type which are characterized by being overly organized for this age group, or having a highly emotional content. He recommended that physicians realize their important place in adaptation of sports to the physical needs of an individual child. He made the point, for example, that if a doctor says a boy cannot play football, the boy does not lose prestige with his peers. Dr. Reichert also indicated that physicians who have worked with physical educators in their local schools have found it a stimulating and rewarding experience. There is certainly a need for physical educators and physicians to have a common vocabulary and for them to talk understandably with each other. National organizations cannot achieve for local situations what the community coaches and physicians can achieve in their own local community.

The Committee on the Medical Aspects of Sports of the American Medical Association is providing national leadership in stressing the need in athletics for proper health protection procedures. Through national conferences on this subject, through a variety of publications and through the encouragement of state and local conferences on injury prevention, the Committee is trying to help make the athletic experience safer and more healthful for participants.

A check list against which local school systems can appraise the health aspects of their athletic programs is available through the office of the Committee at the American Medical Association in Chicago. Allan J. Ryan, M.D., of Meriden, Connecticut, is the present chairman of this important committee.

One of the many factors important in safeguarding the health of the high school athlete is adequate medical care. Among the questions in the American Medical Association check list are:

"1. Is there a thorough pre-season health history and medical examination?

"2. Is a physician present at contests and readily available during practice sessions?

"3. Does the physician make the decision as to whether an athlete should return to play following injury during games?

"4. Is authority from a physician required before an athlete can return to practice after being out of play because of disabling injury?

"5. Is the care given athletes by coach or trainer limited to first aid and medically prescribed services?"

What can a state medical society or local medical society do as a profession in helping to guide wisely the extent of athletic competition, and how can a private physician have some influence in preventing unnecessary injuries that occur to the boys in his own community?

A physician, as a member of the medical profession, can

1. Be active in regular meetings of his medical society or local medical group and suggest items and programs of interest in relation to schools.

2. Suggest that interested physicians take the initiative in getting acquainted with the school principal and encourage physicians to become familiar with the program of the school.

3. Encourage the appointment by the medical society of a physician who is interested in school problems to work with the educators, including the physical educator.

4. If a school health council has already been started, it will help both the physician and the educator because of the opportunity for reviewing health problems of school children, with other persons who contribute to a good program such as the teacher, the nurse in the school, the custodian, the local director of health, the school medical adviser, etc. In a school health council, a practicing physician can be fairly specific in making recommendations when he is serving as a representative of the medical profession and can point out problems and recommend action which should be taken.

SUMMARY

Traditionally, the American Medical Association since 1947 has conducted once in two years a National Conference on Physicians and Schools. The 1957 National Conference raised pertinent questions regarding fitness, including competitive sports. The Committee on the Medical Aspects of Sports of the American Medical Association is also encouraging sound athletic programs through its various activities.

N. B. The next three articles in this series will be as follows:

Part II—The Connecticut State Medical Society's Contribution in Assuring School-Age Children Good Health, As Reported at the 1957 National Conference on Physicians and Schools.

Part III—1959 National Conference on Physicians and Schools, Showed Ways in Which Physicians Can Gain for Their School-Age Patients a Practicable Health Program.

Part IV—The Direction the Medical Profession May Move: Communicate With Educators for a Common Stake in the Atomic Age.

THE FUTURE OF VOLUNTARY HEALTH INSURANCE AND PREPAYMENT PLANS

Editor's Note: The following remarks were presented by **William R. Richards, M.D.,** *General Manager of The Connecticut State Medical Society before the Sixth Regional Conference on Voluntary Health Insurance and Prepayment Plans held in Boston, Massachusetts on March 24, 1961.*

The other day, I heard a comedian tell a story about a doctor-friend of his for whom things were so bad, he had to put his stethoscope on a party line. Now I would not seriously suggest that many of this country's practicing physicians are really in that much trouble, but if we turn our eyes to the East and the West of America, we find that doctors of medicine elsewhere in the world are facing some very difficult problems and that most of these problems relate to the economic side of medicine. Reports of strikes being carried out by physicians against their government in France, Yugoslavia, Japan and elsewhere have brought no glory to the profession, and while none of us can condone these coercive actions of our foreign colleagues, many of us can be sympathetic toward the deep sense of frustration they must be experiencing in realizing, too late, that when government becomes a direct participant — a third party, if you will — in what should be a private sector of the economy, it loses its rightful function of acting as an impartial mediator and becomes, perforce, dictatorial and biased in its decisions.

Now, what has all this to do — you may ask — with the subject under discussion here this morning, which is the future of voluntary health insurance and prepayment plans in the United States? And I will reply by saying that it has a very great deal to do with our subject, because, as most of you know, some of these same serious problems are now confronting American physicians as a result of the extreme pressure being brought to bear on our people and their representatives in Congress to adopt a form of compulsory national health service in *this* country, for the aged now and for everyone later on.

The most hopeful alternative we have to this so-called socialization of medical practice and medical care is the financing of health costs through voluntary insurance and prepayment programs. Certainly the record of steady and rapid progress, productive experimentation, wide public acceptance and fiscal soundness of the health insurance movement in the past three decades is one to be proud of, and the medical profession is solidly behind those who seek constantly to improve and expand the coverages available to the public. We support these plans in principle as well as in practice because, under them, patients are able to budget their health costs, doctors are reasonably assured of receiving certain payments for their services, and both can enjoy complete freedom of choice in their mutual relationship.

Part and parcel of Medicine's opposition to government interference in matters of health is the practicing physician's deep and adamant conviction that he must remain absolutely free to use his best professional judgment in all matters pertaining to the treatment of his patient. Despite what some people say, medicine is a strongly self-disciplined calling and each doctor, therefore, voluntarily submits to controls within the profession which seek to guarantee to the public the highest quality of medical care. He rebels, however, against outside regulation of what he will do or will not do for his patient, because the responsibility for his performance is entirely his own and cannot, under any circumstances, be sloughed off on the grounds that *this* particular procedure will not be paid for by a third party agency or *that* particular type of treatment will not be paid for except on the basis of so many allowable units per month or per year. There is a real and vital difference between "medical care", which is provided to patients exclusively by physicians and other health professionals, and various plans which help people *pay* for medical care, which are really what third party agencies offer.

Having outlined our basic objection to compulsory government-controlled schemes, where does the profession stand with regard to our Number 1 alternative — voluntary health insurance. I have already said we are solidly behind the private companies and the Blues in their efforts to meet the needs of the people in financing health care costs, but I hope it will not seem paradoxical if I admit that our support is not entirely devoid of reservations. People who attack fee-for-service medicine the most bitterly always charge that doctors are dragging their feet in putting medical care on what they call a "businesslike" basis, and contend that the profession is 19th Century in its medico-economic thinking. Being perhaps the most rugged of rugged individualist, it may well be that we are little slower than some others to jump eagerly on the bandwagons of untested medical New Deals or New Frontiers, but the fact still remains that most practicing physicians feel the word "voluntary" will become quite meaningless for themselves and their patients if, through pressure, expediency or haste, the same objectionable regulations which they fear will be imposed upon them by government start showing up in a more sugar-coated form in the contracts developed by non-governmental third parties. Time will not permit me to more than touch on the nature of these fears, but I do want to mention a few in some detail.

For example, we believe that there is too much emphasis being placed on the absolute "predictability" of medical care costs and too much pressure being brought to bear on making these costs predictable in the life-insurance sense. Death may be inevitable, as are taxes, but just how much in the way of health services will be required to treat a specific disease condition in a specific patient cannot be accurately measured in advance. We can seek to determine averages and medians in actuarial fore-castings, and most physicians are gradually accommodating to this approach to providing realistic insurance benefits, but no self-respecting practitioner can be bound in his professional judgment by limitations of payment for services which may have to be imposed by an insuring agency for reasons of financing. Many of us have been nearly driven to distraction in attempting to submit government claims for treating an acutely ill patient daily for ten days, when only one visit a week for four weeks is allowable.

Another cause for concern among physicians is the possibility that the voluntary plans may gradually yield to the demands of so-called "consumer representatives" for first-day, first-dollar coverage — a most expensive proposition, at best, and one which in its ultimate operation fosters the imposition of arbitrary cost controls, very similar in nature to federal wage and price controls which everyone professes to abhor. We all understand that you can't thread a quarter inch nut on a half inch bolt, or put two pounds of potatoes in a one pound bag, but some people seem to feel that, as one disgusted medic put it, "you can expect to serve an elaborate 10-course smorgasbord dinner of medical services for the price of a hot-dog and coffee gulped down at the lunch counter". We believe you cannot.

Under our Blue Shield plans, physicians are cooperating in subsidizing their operation through the observance of the service benefits principle. In most cases this has worked out very well and to the mutual advantage of the patient and his doctor. However, in Connecticut, there seems to be no interest at present in following National Blue Shield's suggestions that "at least 75% of the people in an area" be covered on a service basis or in the idea that there should be uniformity of plans all across the country. Complete or nearly complete service programs may have a proper place in some sections, but we believe this is strictly a matter for local determination. National plans with standard coverages and uniform payment schedules often exclude from consideration important differences in the costs of practice and other economic conditions which exist even within state boundaries, and physicians in Connecticut appear to want no part of having their services somehow get mixed up with industry-wide bargaining and such like.

As to the future of voluntary health insurance, we believe it can and should be a very bright one if only the heavy hand of government is not laid on our shoulders. Certainly there should be maximum cooperation and understanding between all of the three parties concerned — the people who insure or prepay their medical costs, the people who help them to insure or prepay, and the people who deliver the medical care product to them.

I believe one of our biggest jobs is to stamp out *un*reality, by improving our communications systems, both internal and external. In my opinion, certain drastic educational steps must be taken if everyone concerned is to understand just what health insurance and prepayment is, what it can reasonably be expected to accomplish, and what it cannot possibly do. As examples of what I mean, let me outline a few of the steps I believe need taking.

First, let's try to counteract and put an end to the dissemination of pap which suggests that for a penny or two a day per person, the American people can somehow be fully insured against a national medical care bill which amounts to nearly 20 billions of dollars annually. Even under socialized medical schemes, deductible and co-insurance principles have had to be introduced in order to ward off impending bankruptcy. Let's let the old business adage that "You get what you pay for," apply to health insurance as well as to other goods and services.

Second, let's put more emphasis on what American medical care really is, and talk less about how much it costs. Certainly the same millions of people who have shown a willingness to pay extra for the convenience of automatic transmission in their modern cars can be educated to recognize something of value in a heart-lung machine, a new wonder drug and the dozens of other life-saving medications, procedures and devices which are now available to them right in their own communities, however small.

Let's do away with propaganda which suggests that health insurance premiums must not exceed what certain pressure groups vaguely define as being "within the ability of the people to pay", and temper with common sense the cries of "pricing the consumer out of the market" which are raised every time Blue Cross increases its subscriber charges 50¢ a month. Certainly the overall costs of medical care protection must be kept in line with those of car insurance, fire insurance, professional liability insurance and the like, but as more and more health services are added to medicine's armamentarium and are gradually included under prepayment contracts, the rates to finance this expanded coverage must be increased accordingly. Any other course will lead to financial disaster and destroy the plans altogether. May we hope the government is listening?

Next, let us reply promptly and forthrightly to sentimental "Letters to the Editor" which naively ask how Mr. and Mrs. Newlywed can possibly be expected to pay the doctor five or ten dollars for a house call in the early morning hours. We, in medicine, have given our pledge that everyone who seeks it will receive the best care available, whether it is paid for or not, and, with very few exceptions, we are honoring that pledge. But in an economy which regularly spends twelve billion dollars a year for liquor, cigarettes and cosmetics, ten billion dollars for home improvements, half a billion for gardening supplies, and $7.50 plus parts for a visit by the TV repairman, who *really* believes that most Americans cannot afford to pay for usual medical expenses out of pocket, leaving insurance to more effectively provide needed protection against the larger or protracted health costs. To be sure, no one wants to be sick, but financing medical care is certainly as much of a reality of life as planning a vacation or building an addition onto the house and it must be faced up to as such.

Finally, let us always be receptive to suggestions as to how health insurance and prepayment plans may be improved and expanded for the benefit of the public, under contracts which are actuarially sound and mutually agreeable to the producers and consumers of medical care. But also let us make it clear that writing sound voluntary health insurance is primarily the business of insurance and prepayment experts; that providing good medical care is primarily the business of medical professionals; and that protecting himself against the possible costs of health services is primarily the responsibility of the individual. The interests of any one of these three parties cannot be overly advanced to the detriment or dissatisfaction of the other two, because, quite apart from selfish financial considerations, the future quality of American medicine is at stake here. That all our people should have, and will receive, good medical care, I am sure we agree, but we must discourage public acceptance of the frequently stated but entirely false premise that medical care — or more specifically, payment for medical care — is something to which every man, woman and child in the country is entitled as "a matter of right." There is no "right" of this nature defined in the Constitution, any more than there is one providing for a ten room house for everyone with five children or chicken on the table every Sunday.

We propose that a philosophy be followed in which those who need help in meeting their medical requirements shall receive it as a contribution of their fellow man, and those who are self-supporting be provided with ever-increasing opportunities to maintain their freedom and independence from government through the medium of voluntary health insurance and prepayment plans.

A.M.A. To Stage Big "World's Fair" Of Medicine In New York In June

The American Medical Association's 110th annual meeting, the "world's fair of medicine," will bring an estimated 50,000 persons, including 25,000 physicians, into New York City, June 25-30.

The five-day convention, biggest of its kind in the world, will attract not only doctors, but also their wives and families as well as residents, interns, exhibitors; in fact, people connected with all the allied fields of medicine. Hence, the convention theme: "Teamwork in Medicine."

The 1961 meeting will mark the eighth time the A.M.A. has met in New York. The last convention there was in 1957 when 23,888 physicians registered.

Technical exhibits, numbering 827 and displaying everything from medical books to diapers, and more than 350 scientific exhibits largely developed, designed, and manned by physicians reporting their research, will take up practically every inch of space on all four floors of New York's big Coliseum.

George B. Larson, director of convention services for the A.M.A., said that "logistics point up the bigness of the June convention."

He said that nine semi-trailer trucks, with unique and complex scientific equipment, and another six semi-trailers carrying such decorator supplies as furniture, booth backgrounds, and carpeting, will leave Chicago for New York on June 15. In addition, exhibitors will bring total freight weighing about 1,500,000 pounds.

The A.M.A. meeting will open formally on Sunday, June 25, with a special preview luncheon and showing in the Coliseum for A.M.A. officers and committee chairmen, members of the Board of Trustes, representatives of the Pharmaceutical Manufacturers' Association, and invited guests.

In the past, A.M.A. conventions opened on Monday, but as a convenience to physicians and in anticipation of the heavy attendance, both the registration facilities and the technical and scientific exhibits will be open and staffed until 5 o'clock Sunday afternoon.

Registration hours, Monday through Thursday, will be from 8:30 a,m, to 5:30 p.m., and until 12 noon on Friday, the final day. The Coliseum will be open, however, to physicians only on Tuesday, Wednesday, and Thursday morning.

SCIENTIFIC SESSIONS

More than 2,000 physicians will take part in the A.M.A. scientific program, which is designed to keep doctors abreast of what's new in medicine.

Teaching mediums will include lectures, symposiums, panel discussions, movies, and closed-circuit television.

More than 300 physicians will deliver lectures before 20 different section meetings. Each section represents a specialty in medicine. The section meetings, which run simultaneously, will be held not only in the Coliseum, but also in hotels nearby: the Essex House, Barbizon Plaza, the Plaza, Henry Hudson, and the Sheraton-Park.

A highlight of the scientific program will be a one-day meeting on Monday, sponsored jointly by the A.M.A. and the American College of Chest Physicians. The American College of Chest Physicians is holding its 27th annual meeting in New York, June 22-26, just prior to the A.M.A. session.

On Tuesday, the A.M.A. will sponsor for the first time a Research Forum. Participants will represent a cross-section of every medical specialty. The Forum program, representing six different sessions with more than 200 participants, also will be held on Wednesday and Thursday. Dr. Edwin H. Ellison, professor of surgery at Marquette University Medical School, Milwaukee, will serve as chairman.

The A.M.A. Section on Otolaryngology will sponsor instruction courses on surgery of the ear, the nose and sinuses, and the throat for the visiting doctors. The program will be repeated three times on Thursday with attendance at each session limited to 50. The courses will be given by Drs. George E. Shambaugh, Chicago, John J. Conley, New York, and Joel J. Pressman, Los Angeles.

High blood pressure due to kidney diseases will be the topic of a combined meeting of five A.M.A. sections: general practice, urology, general surgery, internal medicine, and pathology and physiology. This program, which was arranged by Drs. Edward H. Ray, Lexington, Ky., and E. I. Baumgartner, Oakland, Md., will be held in the Coliseum on Wednesday morning, and a similar program dealing with diseases of the colon will be held in the afternoon. This meeting, which is also sponsored by five sections — preventive medicine, gastroenterology and proctology, radiology, pathology and physiology, and surgery — will close with a panel discussion by all participants. Dr. J. P. Medelman, St. Paul, Minn., will serve as chairman of this joint session.

The A.M.A. Section on Surgery and the Section on Physical Medicine will hold a combined meeting with the American Rheumatism Association in the Coliseum on Thursday with an entirely new program format. On the same day, the Section on Surgery will sponsor a television program showing the various new chemical treatments for cancer of the bowel.

There also will be conferences on diabetes and nutrition with special exhibits complimenting the lectures.

Visiting physicians will be able to view and study the largest and most unusual collection of fresh tissues ever assembled at a medical meeting. All New York hospitals will contribute to this educational exhibit which was planned by Dr. Milton Helpern, chief medical examiner of New York City, on behalf of the A.M.A. Section on Pathology.

Of particular interest to all physicians will be the expanded physical examination booth on the third floor of the Coliseum. It is there where doctors can obtain a heart examination, chest x-ray, and eye examinations. A step next door will take them to a modern laboratory for urinalysis and blood studies. Physical examinations were given to doctors at the A.M.A. meeting in Miami Beach last year and it was found that approximately 20 per cent of the 1,328 physicians, who took the physicals, had heart abnormalities. This represented twice the average for the general population. Fourteen per cent of 1,008 doctors taking chest x-rays were found to have abnormalities.

HOUSE OF DELEGATES

The House of Delegates, the policy-making body of the A.M.A., will meet at the Statler-Hilton, the headquarters hotel, at 10 o'clock on Monday morning.

The first order of business will be to select the recipient of the A.M.A. Distinguished Service Award, which is given annually to the physician who has made an outstanding contribution to medicine. The award will be bestowed at the inaugural ceremony Tuesday evening.

The House, patterned very much like the Congress of the United States, consists of 190 physicians from constituent or state medical societies, plus one delegate from each of the five government services, including the Army and Navy, and one delegate from each of the 20 scientific sections, a total of 215 members.

The delegates are apportioned on the basis of one to each 1,000 members of a state society. New York and California have the largest representation with 18 each, followed by Pennsylvania with 12.

The House of Delegates actually is the voice of American medicine. Any proposal or resolution may originate in one or more of the 1,900 county medical societies, then carried by duly-elected representatives to state meetings, and from there to the A.M.A. House of Delegates for final action.

Matters to be considered by the House will in all probability, include:

—A supplemental report relating to closer cooperation between the American Medical Association, the American Hospital Association, the National Association of Blue Shield Plans, and the Blue Cross Association in promoting "maximum development of the voluntary non-profit prepayment concept to provide health care for the American people."

—A report by the A.M.A. Judicial Council, the "supreme court" of medicine, which will cover the controversial relationship between doctors of medicine and doctors of osteopathy.

—Group disability insurance for all members of the American Medical Association.

—A status report by the A.M.A. Commission on the Cost of Medical Care, which is presently studying all facets of the broad, medical care cost problem.

—A final report by a committee which studied all mechanisms for disciplining members of the medical profession.

—Washington legislation, especially various aspects of President Kennedy's program for health care of the aged through social security.

WOMEN'S AUXILIARY

Approximately 3,000 members of the Woman's Auxiliary will hold their 38th annual convention in New York City simultaneously with the A.M.A. meeting. Headquarters will be at the Hotel Roosevelt.

A.M.A. Creates Two New Scientific Departments

The American Medical Association announced today the creation of two new departments within its Division of Scientific Activities, headed by Dr. John B. Youmans.

The Department of Foods and Drugs will be separated into a Department of Drugs and a Department of Foods and Nutrition.

Dr. William Spring, who was recently appointed secretary of the A.M.A. Council on Drugs, will be the director of the new Department of Drugs. Philip L. White, Sc.D., who previously served as director of the combined Department of Foods and Drugs, and secretary of the Council on Foods and Nutrition, will take over as director of the Department of Foods and Nutrition.

Both the Council on Drugs and the Council on Foods and Nutrition will be served respectively by the staffs of the two new departments.

Statement Of The Connecticut State Medical Society Concerning House Joint Resolution 45: Memorializing Congress to Enact Legislation on Medical Care Of The Aged Through Social Security

Presented by **John N. Gallivan, M.D.**, at a hearing of the Committee on Federal and Intergovernmental Relations, Wednesday, March 29, 1961, in Hartford.

Editor's Note: In regard to Resolution 45, at the hearing before a Legislation Committee in the General Assembly, Hartford, Dr. John N. Gallivan, president of the Society, read the following statement which every member of the Connecticut State Medical Society should read so that he may understand the position of the Society in regard to the attempt being made to place medical care in the Social Security system.

Mr. Chairman and members of the Committee: I am Dr. John N. Gallivan of Hartford, a physician practicing Industrial Medicine, and President of the Connecticut State Medical Society. I am appearing here today as an official spokesman for the Connecticut State Medical Society. While I cannot pretend to speak for every last one of our some 3300 physician members, I assure you my remarks will truthfully reflect most medical opinion in this State on the matter under consideration.

The Connecticut State Medical Society is not a wealthy organization. It is certainly not "powerful" in any sense, nor, since its founding in 1792, has it ever been operated for the pecuniary benefit of any of its officers or members. Most of its limited budget is spent on disseminating scientific information among doctors, and in the advancement of the public health.

For this reason, I appear before you as the Society's representative unaccompanied by statistical experts or any partisan gallery save for some of my colleagues who have voluntarily taken time off from demanding professional schedules to attend this important hearing. Our principal reason for testifying before the Committee on Federal and Intergovernmental Relations is that House Joint Resolution No. 45 deals with medical care and we are doctors of medicine.

It has only been in comparatively recent times that many of us have entered into the field of social economics, medical economics and, to a very limited extent, political economics. The accelerated contemporary interest of physicians in these matters began in mid-summer of 1959 when some of them first heard of a Mr. Forand of Rhode Island. At that time, Representative Forand was proposing to the Congress a compulsory medical plan for the aged which we did not like the sound of, and, very frankly, Mr. Chairman, we still do not like the sound of it even though the new administration is now its sponsor and the proposed coverage has been curtailed so as not to include doctors' office services.

I suspect no one will be especially surprised, then, to learn from me that the Connecticut State Medical Society wishes to place itself on record as being against the adoption of House Joint Resolution No. 45 by the General Assembly. We speak against its adoption because, as citizens, we are opposed to the enactment of legislation which is based on compulsion, and because, as physicians, we are opposed to having the Federal government — or any level of government — place itself between us and those patients who, of their own free will, choose to seek our professional services. I point out that we make no distinction between patients who can pay for our services and those who cannot. In our minds, there is no difference, but it is not possible to say the same for those who propose to make the financing of health costs a function of government. We, in medicine, have given our pledge that everyone who seeks it will receive the best care available, irrespective of ability to pay, — without binding contracts, without special agreements and without red tape. I believe that wtih very, very few exceptions, our profession has honored and is honoring that pledge.

I regret to say that people in high places are making serious charges against the motives of physicians who hold to this position, and against their representative organizations such as the American Medical Association. Deferring for a moment the evaluation of the aged medical picture in Connecticut, I should like to express some thoughts on several of the charges I have just referred to.

The first is that "many doctors are strongly behind legislation which would put medical care for the aged under Social Security, but are afraid to speak out in its support for fear of reprisals being taken against them by their colleagues." I take this opportunity to state categorically that there is not, and never has been, any policy of the AMA or of the Connecticut State Medical Society or of its eight constituent county associations which would discourage any member at any time from voicing his own opinions freely, whether such opinions are in keeping with those of the majority or not. When we have internal disagreement — and we do! — we resort to the polls and not to the purge to resolve them.

The second of these representations is that the "doctors are misleading the American people when they label Social Security health-care-for-the-aged plans as 'socialized medicine.'" Although I have a personal distaste for the term, I do not believe there is anything "misleading" in our profession taking its case to the people and warning them of the dangers inherent to plans under which the government is given the power to regulate and control medical care by virtue of the fact that government is also given the power to pay, or not pay, for such care. This, we submit, is government-controlled medicine, whether it is called "socialized" or something less controversial, and it is not the inclusions or exclusions we fear in these schemes. It is the dangerous element of control.

To clarify our position, and to make the term "socialized" clearer of meaning and less of a dirty word, let us draw a parallel between certain matters of record and determine if the morality of our position can be justified. In the year 1948, at about the same time the American people were soundly rejecting a Federal health plan, the government of Great Britain was pressured into establishing a system of compulsory medical care for its citizens. It was a new system, they said, which would have three main objectives. First, it would provide comprehensive medical services for everyone, and they would receive it "as a matter of right." Second, it would build new and better hospitals for the treatment of the sick, and expand and modernize existing facilities. And third, it would improve medical education and promote research, thereby creating a healthier nation. All this would be done for the people — and more — simply by imposing a tiny little tax on them; just a few pennies a day was all it would cost.

About twelve years have passed since our nation turned down compulsory national health service, and roughly the same period of time has elapsed since the other country of which we speak started its socialized program. It seems only fitting that we should compare the performances of the two systems — the free and the controlled — particularly in view of the furore which some people are creating about how outmoded and costly American medicine is today, and how the government ought to step in and do something about it. We certainly don't want second best over here, and if their plan has turned out better than ours, we had better find out about it.

Reports on the achievements of the British system vary somewhat, but a few basic facts stand out. The cost of its operation is now almost eight times greater than the most generous estimates of its original planners, yet a number of covered services have been eliminated and extra out-of-pocket charges have been assessed on many others. It is difficult to determine if the people's health is better than it was. There are more glasses and dentures being worn, of course, but absenteeism from work for reasons of health is said to be considerably higher than it used to be. Hospitals and doctors' offices are overcrowded, with nearly 500,000 patients waiting as long as four or five years to have elective surgery done. Not a single new hospital was built or an old one modernized from 1948 through early 1960, and the former eminent position of British research has not been maintained. Most significant of all, in our minds, is that each year the government has had to impose more and more taxes on the people to provide them with less and less health services, and the individual's freedom to choose has been gradually lost in an undoubtedly necessary, but completely bewildering, maze of regulation and control which extends from London right down to the smallest hamlet.

That, Mr. Chairman, constitutes a very brief but factual assay of the promises versus the performance of England's compulsory National Health Service during the past twelve years. Now we would like to draw attention to what our American system of medicine has accomplished in the same period. If their physical fitness leaves something to be desired, the *health* of our people has never been so good. More patients are getting more modern medical care today than at any time in history, and it is being delivered to them by the physicians of their choice. Longevity is increasing, year by year, and our research is high in initiative and productivity. Our medical education is the best to be found anywhere. The number of people protected by voluntary health insurance has increased from a few hundred thousand to over 128 million, and as a particular point of contrast, more hospital construction and refurbishing was carried out in the little state of Connecticut during the twelve *months* of

1959 alone, than during the entire twelve *years* of England's socialized experiment. All this has come about with a minimum of government participation. This, we submit, is a record to be proud of and we contend that it is not misleading to warn the people of what may happen to American medicine if they petition the Congress to take over its operation, in whole or even in part, as is being proposed in the Resolution now before this committee.

For some reason, the spokesmen for certain groups which favor this type of legislation keep referring to it as "health insurance," which, of course, it is not, because it is not based on insurance principles and proposes to observe no sound balance between the so-called "premiums" to be paid in by the employed worker and his employer, and the so-called "benefits" to be paid out to the retired pensioner. The President, himself, has said he has no idea how much such a program would cost, yet an attractively low tax exactment has been set at *only* 1/4 of one percent from each employer and employee to finance it. We doubt that any responsible insuring agency would venture to sell any plan on that basis, or that any thinking prospective customer would buy it on these highly indefinite terms.

Be that as it may, let us examine the proposal submitted by Mr. King of California in HR 4222, 87th Congress. In the "Statement of Findings and Declaration of Purpose," it is said that: "The Congress hereby finds . . . that most of the aged are not able to qualify for and to afford private insurance adequately protecting them against" the "heavy costs of hospital care and related health care." Now, how does this contention stand up in Connecticut? I hope most of you are aware that well over 80% of this State's older residents carry insurance protection, many of them holding several types of coverage. More than 50% have both Blue Cross and Blue Shield, and better than 30% have private plans. These figures are a matter of public record, and to demonstrate that they really mean something more than cold statistics, let me call your attention to the fact that, in 1959, out of some 1300 patients over 65 admitted to the Backus Hospital in Norwich, only 189 — less than 12% — did not have hospital insurance. As an interesting sidelight to this analysis, it was found that the record of these older people in making complete payment of their hospital bills was as good or better than that of their younger counterparts. We submit, Mr. Chairman, that whatever limited number of senior citizens there may be in Connecticut who *cannot* afford or qualify for health insurance, and who *cannot* finance their own medical needs in usual circumstances, a sizeable majority of them not only *can,* but actually *are,* meeting their requirements in this aspect of living right now.

We all appreciate that this voluntary coverage, as good as it is, does not make payments on a dollar-for-dollar basis, and that deductible and co-insurance features do leave a limited area of personal and family responsibility, but we must keep in mind that all plans which attempt to provide total coverage are constantly faced with bankruptcy. Even the King Bill limits its proposed coverage for this reason.

None of the voluntary plans pretend to offer "medical care" to their policy holders. I point out here that to physicians, medical care means *all* professional services which are necessary for the complete treatment of a particular patient, in such amounts and for such periods of time as may be required. It is the objective of insurance to protect against the costs of as many of these services as possible within the framework of sound financing, and we believe that the voluntary plans are doing, and will continue to do, a much better job in attaining this objective than can be accomplished under the inelastic and regulated provisions of a compulsory Social Security program. As evidence of what is being done by the insurance and prepayment agencies in this State, let me commend to you for favorable action bills before the General Assembly now which would enable several of our outstanding insurance companies to make available Major Medical protection to all senior citizens, (Senate Bill No. 815 and House Bill No. 3640) and permit the Blue Plans to appropriately extend their coverages of important health services (Senate Bill No. 984 and Senate Bill No. 419).

As observers closest to the medical scene, we physicians believe that medical care for the aged is available to all who seek it in the State of Connecticut, and it is our opinion that the enactment of Social Security health legislation will take more medical care *away from* our older people than it will ever *bring to* them. We have noted with interest that in preparing to implement the federal food stamp program, the Department of Agriculture is already complaining that just to print and issue the stamps and to guard against anticipated abuses, more than one-third of the dollar value of the food to be distributed will be expended just for administration. Compare this, if you will, with the administrative costs of our local Blue Cross and Blue Shield Plans, or even with our tax-paying private insurance carriers. Their costs rarely exceed 10%, and 85¢ or more is thereby returned to the policy holder in benefits out of each dollar of premium he pays in. Let us all give serious thought to administrative efficiency and ultimate value received when we are deciding which enterprises to leave in the private sector, and which to relegate to government.

Here let me say a word about costs from another standpoint. It is made clear in every voluntary health policy just what services will be payed for and under what circumstances. But in all proposals for Social Security medicine, there are many serious questions which must be answered. For example, under the popular descriptive title of "medical care for the aged," does old age by itself call for the application of medical treatment? Are uncomplicated feebleness and senility to be classified as diseases which require hospital or nursing home care? Where does family responsibility for giving simple custodial care to the old folks end, and Federal medical care for the aged begin? These are not rhetorical questions, Mr. Chairman, and doctors do not have the answers to them. Perhaps others are clearer on these points than we, but on one point we are clear and will stand firm. Though the most recent proposal of Representative King is said to confiine itself only to non-physician health services, some of our severest critics among groups which favor government medicine are already suggesting that the practicing doctors of this country will assume the responsibility for making all these impossible decisions I have just described — decisions which, collectively, are sure to drain billions of dollars annually out of the Social Security fund, endangering the cash benefits program and adding further to the heavy tax burden being borne by young working people.

Speaking for my practicing colleagues, I will say categorically that we cannot shoulder such grave responsibilities. We will fill out complicated government forms, if we have to. We will continue to take care of the sick as we always have, for full fee or for no fee. But we cannot go along with any proposition that we become the policemen and enforcement officers of a bureaucratic monstrosity such as is sure to spring into being if medical care for the aged is put under government control.

Before concluding, I should like to make a few remarks about the so-called "medically indigent" among the aged — those who can get along very well as independent Americans under normal conditions but who may need help, from time to time, when and if serious or prolonged illness strikes. I am not speaking now of the totally indigent — some 15,000 of them in Connecticut — whose needs, including medical care, are already being provided for under one of the best Old Age Assistance programs in the nation. I might mention, in passing, that physicians in the State contribute thousands of hours of time and skill each year, without compensation, to the successful operation of this plan in our general hospitals. Neither am I speaking of the large majority of our senior people who are demonstrating their ability to finance medical costs through voluntary insurance, as I described previously. The "medically indigent," at the present time, constitute a group of unknown size which we believe can and should receive help in meeting their medical costs through the Kerr-Mills program (Public Law 86-778). The architects of this legislation wisely refrained from misrepresenting that it provided *medical care* for the aged. Instead, they stated quite correctly that its purpose is to provide *financial assistance* to the aged for medical care, under certain liberal circumstances of need which each state may determine for itself.

I have just said that the number of medical indigents is presently unknown. We believe it might constitute perhaps 10-15% of our 230,000 over-65 residents in Connecticut. The reason for the doubt in this matter is that financial help should reflect financial need, and that statistics on the matter of need are in serious disagreement. I note with interest that a *Hartford Times* editorial of March 21 recognizes this state of confusion by contrasting the Department of Health, Education and Welfare's estimate that some 66% of Connecticut's older population have incomes of $1500 or less, while in New York State, at an even higher income level, it is calculated that less than 10% fall in the group who need to be made eligible for Kerr-Mills assistance. The *Times* concludes, in effect that as long as there "remains a gulf of ignorance and confusion about the true incomes and needs of the 16.5 million over-65 group in this country . . . ," the Congress is not likely to be hurried into action beyond the Kerr-Mills solution it offered about six months ago. To which, we doctors add: Amen.

In conclusion, Mr. Chairman and members of the Committee, I thank you for this opportunity to present the aged medical picture in Connecticut as viewed by your State Medical Society. We have not appeared here today to lobby for ourselves nor do we have any motive to further except what we believe is best for the health of the people. Therefore, we not only urge the members of the 1961 General Assembly to vote against the adoption of House Joint Resolution No. 45, but also, because of the depth of our conviction in this matter, we express the hope that the members might wish to join us in petitioning the Congress *not* to enact additional health plans for the aged of any kind, thereby giving the Kerr-Mills program of assistance a chance to help those who may be found to need it.

To anticipate the harvest you must consider the seed from which the plant is grown.

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It is human nature to ask: "What's behind it?" The fact that our nation's doctors stand behind Blue Shield, through their local medical societies, is certainly an important reason for its widespread acceptance. One doctor summed it up this way: "The public will have faith in Blue Shield so long, and only so long, as we the doctors have faith in it and continue to endorse it." **BLUE SHIELD** ®

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Around The State

New Haven County

The New Haven County Medical Association held its 177th Annual Meeting at the Waverly Inn March 23, 1961. William R. Richards, General Manager of the Connecticut State Medical Society, discussed matters of interest now pending in the General Assembly. These are fully described in the March 1961 issue of *Connecticut M.D.* and are of vital concern to all practitioners. Of particular importance is House Joint Resolution No. 45, which proposes that the General Assembly memorialize Congress to enact legislation for medical care of the aged via the Social Security system. Every doctor should let his state legislator know his opinion of this proposal.

Anthony J. Mendillo of New Haven became president of the New Haven County Medical Association.

Reports were received from Jachin B. Davis and Israel E. Blodinger describing recent attempts to undermine State Society representation on the Board of Directors of C.M.S. These maneuvers met with prompt and vigorous rebuttal on the part of our state officers. At least for the present it appears that the right of the State Medical Society to designate one half the membership of the C.M.S. Board of Directors will not undergo further challenge. Physicians who failed to hear the description of these skirmishes missed a good show with important implications for the practice of medicine.

Luca E. Celentano, Chairman of the Public Relations Committee, discussed among other items the proposed car leasing program for members of the Association, expressing the hope that the suggested rental fees might be lowered. Clyde Deming presented in detail the amendments to the by-laws of the Association proposed by his committee to review and re-edit the by-laws. Each of the suggested revisions was discussed and voted on separately. It was a tribute to the committee's work, which had entailed many hours of detailed consideration of the entire body of by-laws, that its proposals were accepted by the Association almost without change.

The following resolution was passed by the membership: The New Haven County Medical Association is unalterably opposed to payment of money to any hospital in this county by any member of this Association for the purpose of obtaining or retaining an appointment on its staff, or for the purpose of getting his patients admitted to said hospital; and be it further resolved that this Resolution be forwarded to the Council of the Connecticut State Medical Society for consideration and action.

Dr. Mendillo was elected to a one year term succeeding Henry Caplan of Meriden who became a member of the Executive Committee.

Other officers elected were: Waldo E. Martin of Milford, vice-president and Hyman A. Levin of New Haven, clerk. They and Dr. Mendillo also became delegates to the Connecticut State Medical Society.

At the joint dinner meeting of the New Haven County Medical Association and the Women's Auxiliary, past president citations were awarded to seven doctors, four of them New Haveners.

They were: George Blumer of California, formerly of New Haven; Herbert Thoms of New Haven; Cole B. Gibson of Meriden; William J. H. Fischer of Milford; Louis H. Nahum of New Haven; Ralph W. Nichols of New Haven and Henry Caplan, the out-going president.

The speakers were Dr. Caplan and John Gallivan, President of the Connectcut State Medical Society.

The following members were appointed to elected committees:

Leo L. Tylec of Naugatuck was named to a three year term on the Committee on Credentials. Garland Weidner of Waterbury was named to a two year term on the Committee on Public Policy and Legislation. Kurt Pelz of Wallingford, John Beeble of Naugatuck and Steven P. Magyar of New Haven became two year members of the Board of Censors.

Named to the Committee on Third Party Payments were, Max Caplan of Meriden, chairman; Louis C. Backhus of Waterbury; Steven P. Magyar of New Haven; William E. Swift of New Haven; Morris A. Granoff of New Haven and Donald Badner of Meriden.

Others named as Delegates to the Connecticut State Medical Society were:

Louis C. Backhus, Waterbury; Dana L. Blanchard, Branford; Harry L. Berman, New Haven; Patrick N. Brown, Meriden; Bernard A. Burnham, Waterbury; Samuel Climo, New Haven; Alphonse DellaPietra, Waterbury.

Clyde Deming, New Haven; Carl Butenas, Meriden; John H. Galen, Derby; Elliott S. Brand, New Haven; Morris A. Granoff, New Haven; Sidney B. Luria, Waterbury; Steven P. Magyar, New Haven; Clement C. Clarke, New Haven; Elliott B. Mayo, Waterbury; Arnold Baskin, New Haven; Kurt Pelz, Wallingford; Michael J. Esposito, Meriden; Stewart J. Petrie, Ansonia; Frank K. Abbot, Waterbury; John P. Riesman, New Haven and Jacob A. Saltzman, Waterbury.

Named as alternate delegates to the Connecticut State Medical Society were:

James A. Riley, Woodbridge; Robert B. Boyd, Wallingford; Frederick H. Treder, New Haven; Robert F. Buckman, Milford; Andrew S. Wong, Hamden; Joseph A. Fiorito, New Haven; Vincena A. DeLuca, Jr., Derby; Charles T. Flynn, Jr., Meriden.

John H. Flynn, New Haven; Michael F. Gualtieri, Waterbury; Mark A. Hayes, New Haven; John Holden, Ansonia; Milton L. Jennes, Waterbury; Edward S. Lewicki, Waterbury; Nicholas LaFemina, New Haven; David W. Parke, Meriden; Gioacchino Parrella, Milford; Maxom M. Senfield, Ansonia; Eugene Silliman, Meriden; John E. Standard, Naugatuck; Alfred Kummer, New Haven; Paul Winer, New Haven; Paul Wohlgemuth, Waterbury; Joseph J. Ventimiglia, West Haven; Sylvester J. Ryan, Waterbury and Marvin P. Zimmerman, Hamden.

Barnett Greenhouse, New Haven, spoke on the oral anti-diabetic compounds at the Clinical Session of the Phi Lambda Kappa Fraternity at Miami Beach, Florida on March 20.

Harry A. Conte, who practised in New Haven for more than forty-four years and prominent in public affairs died April 17 at the age of 71, after a long illness. A complete biography will appear in a subsequent issue.

Doctor's Office

Bradford N. Blanchard, M.D., announces the opening of an office for the practice of internal medicine at 137 Jefferson Street, Hartford.

Edward M. Keelan, M.D., announces the opening of an office for the practice of psychiatry at 135 Gulf Street, Milford.

Marvin Levenstein, M.D., announces the opening of an office for the practice of general medicine at 1890 Whitney Avenue, Hamden.

Anthony D. Mancini, M.D., announces the opening of an office for the practice of internal medicine at 176 Tyler Street, East Haven.

Thomas F. McLoughlin, M.D., announces the opening of an office for the practice of internal medicine and cardiology at 885 West Street, Danbury.

Horace Sarter, M.D., announces the opening of an office for the practice of pediatrics at 1107 New Britain Avenue, Elmwood.

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PDW-11

Fully Utilized Salk Vaccine Could Virtually End Polio

Polio could be "virtually eliminated" with the currently available Salk vaccine if the population was adequately inoculated, four Baylor University researchers said.

Their conclusion was based on a study of polio cases occuring in the Houston area in 1958, 1959, and 1960, which showed the Salk vaccine provided "highly effective protection against paralytic poliomyelitis in persons who have had a series of three or more inoculations."

Joseph L. Melnick, Ph.D.; Matilda Benyesh Melnick, M.D.; Ramiro Pena, B.A., and Martha Yow, M.D., Houston, reported their study in the recent Journal of the American Medical Association.

Of 100 confirmed cases of paralytic polio in 1958 and 1959, the authors said, only 3 occured in patients who had received 3 or more Salk vaccine shots.

The vaccine also protected against aseptic meningitis, a non-paralytic form of polio, they said. Of 23 such cases, they said, only 2 involved patients who had 3 or more Salk shots.

In 1960, the authors reported, there were five cases of paralytic polio and none of the patients had taken the full course of Salk shots. There were also two cases of nonparalytic polio and neither patient had received any vaccine, they said.

"Although the numbers in 1960 are too few to be meaningful by themselves, they are similar to the data obtained in 1958 and 1959, and add support to the view that cases of poliomyelitis, exhibiting either paralysis or aseptic meningitis, can be virtually eliminated by the adequate use of poliovaccine," the researchers said.

Polio continues to appear because the vaccine is not administered to all susceptible persons, they concluded adding:

"No better results can be expected of any vaccine—either the inactivated one in current use, or the living attenuated one now under consideration in the United States—unless it is fully utilized in the susceptible population."

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Mrs. Fritz Meyer, Bridgeport

Auxiliary Leadership Changes

Mrs. George J. Rosenbaum of West Hartford assumed the presidency of the Woman's Auxiliary to the Connecticut State Medical Society at the annual meeting held on April 26th, at the Race Brook Country Club in Orange. Mrs. Rosenbaum is a past president of the Hartford County Auxiliary and succeeds Mrs. Morton Arnold of Windham Center.

The business meeting was held at 10:30 A.M. at which time reports were given, the 1961-1962 budget adopted, revisions to the by-laws were adopted, the nominating committee for 1961-1962 was elected and delegates to the Auxiliary National Convention in New York City June 26-30, 1961 were elected. A memorial service for deceased members of the Auxiliary was conducted by the historian and necrologist Mrs. Edwin R. Connors.

Following the social hour, luncheon, and introduction of guests, Mr. Aubrey D. Gates, field service director of the A.M.A. spoke. His subject was "Who Shall Prescribe for the Ill?"

The new officers were inducted by Mrs. Hannibal Hamlin, Regional vice president of the Woman's Auxiliary to the A.M.A., Mrs. Arnold presented the new president with her pin and Mrs. Rosenbaum addressed the members and concluded the meeting.

National Convention Program

The 38th annual convention of the Woman's Auxiliary to the American Medical Association will be held at the Roosevelt Hotel in New York from June 26-30, 1961. All members of the National Auxiliary, their guests, and guests of physicians attending the convention of the American Medical Association are invited to participate in all social functions and attend general meetings of the Auxiliary. Gulliver's Trails, Inc. has set up a special service for children accompanying their parents to the convention, planned under the auspices of the Woman's Auxiliary to the A.M.A., for children from the ages of five through 12.

The formal opening of the Convention will be at 9:00 A.M., Monday, June 26, and the formal closing will be Wednesday, June 28. The Auxiliary planning session will be on Thursday, June 29.

Social functions planned will include: a tea on Monday, June 26 honoring the President, Mrs. William Mackersie, and the President-Elect, Mrs. Harlan English at the U.N. headquarters; a luncheon honoring the National past presidents on Tuesday, June 27 and the inauguration ceremony, reception and ball in honor of the President of the A.M.A. on Tuesday, June 27.

Plan *now* to attend this convention!

38th Annual Meeting
Woman's Auxiliary To The A.M.A.
Roosevelt Hotel, New York, N. Y.
June 26-30, 1961

Make reservations as soon as possible.

Write to the hotel direct-45th and Madison Ave., N. Y., N. Y. or a postcard to Auxiliary headquarters office will bring a reservation blank with rates listed.

OBITUARY

Paul Stetson Phelps, M.D.

1904 - 1961

On January 31, 1961, the death of Dr. Paul S. Phelps, after a prolonged illness, saddened his many friends.

Born in Maine on March 8, 1904, Dr. Phelps attended grade school in Farmington, Connecticut, Worcester Academy in Massachusetts, and received undergraduate and medical degrees from McGill University in Montreal, Canada. He interned at the Royal Victoria Hospital and Montreal General Hospitals in Montreal and at the Danbury Hospital in Connecticut. He also did graduate work in tuberculosis at Henry Phipps Institute, University of Pennsylvania.

Following four years of general practice in New Milford, Connecticut, he became First Assistant to the Director at Colfax Sanitarium in California from 1934-1936. He then returned to Connecticut as Director of the Bureau of Tuberculosis of the Hartford Board of Health where he served until 1940 when he was appointed the first Director of the State of Connecticut Tuberculosis Commission.

Under his guidance an outstanding program for the control of tuberculosis in Connecticut was developed. This involved wide-spread chest X-ray surveys in communities and industries, a state wide case register, a network of consultation chest clinics, a public health nursing consultation service, a student nurse training program, and improvements in medical and surgical treatment. These factors played a significant part in eliminating hospital waiting lists, cutting hospital stay in half and in drastically reducing the death rate from tuberculosis.

When the Tuberculosis Commission and the Commission on the Chronically Ill, Aged and Infirm were combined to form the new Commission on Tuberculosis and Other Chronic Illness in 1957, he became the Executive Director of this agency and was instrumental in the development of the program for treatment of patients with chronic illness and medical rehabilitation which supplemented the treatment program for tuberculosis. His vision, good judgment and diplomacy enabled the newer aspects of the program to be integrated smoothly with the well established tuberculosis control program.

His career was climaxed by his appointment in 1959 as Deputy Commissioner of Health in the Office of Tuberculosis Control, Hospital Care and Rehabilitation of the enlarged Connecticut State Department of Health. He retired from this post on December 15, 1960 for reasons of health.

He was formerly president of the Connecticut Trudeau Society, consultant to the U. S. Public Health Service, Veterans Administration, Hartford Hospital and lecturer in Public Health, Yale University School of Medicine where he had been Assistant Professor since 1949. He was a member and chairman of the Medical Examining Board, State Employees' Retirement Commission since 1954.

His devotion to the cause of tuberculosis control and his many years of experience and training ideally suited him in his role as director of tuberculosis control activities in this State. His wonderfully kind and understanding attitude towards his fellow workers, his keen mind and gentlemanly conduct endeared him to all. Letters and messages he received from all over the United States in the weeks prior to his death attest to the affection and regard with which he was held.

His many friends and associates join those of us who were privileged to know his family in expressing our sympathy.

James A. Hanaghan, M.D.

In Memoriam

O'Donnell, Hugh B.—Milford; University of Columbia College of Physicians and Surgeons; a surgeon at Milford Hospital and a diplomate of the American Board of Surgeons, Dr. O'Donnell was active in the American College of Abdominal Surgeons; served as a lieutenant in the U.S. Navy during World War II; died unexpectedly March 11, aged 44 years.

A.M.A. And Chest Physicians Plan Joint Session In N. Y.

A full day scientific meeting, sponsored jointly by the American Medical Association and the American College of Chest Physicians, will be one of the outstanding features at the 110th annual A.M.A. convention in New York City, June 25-30.

Dr. Coleman B. Rabin, New York, secretary of the A.M.A. Section on Diseases of the Chest, planned the program for this joint meeting, which will be held on Monday, June 26. Chairman of the morning session will be Dr. Herman J. Moersch, Chicago, chairman of the A.M.A. Section on Diseases of the Chest. Chairman of the Monday afternoon session will be Dr. Hollis E. Johnson, Nashville, Tenn., president-elect of the American College of Chest Physicians.

The joint program, which was arranged so as to be of interest to specialists and general practitioners alike, will follow the scientific assembly of the American College of Chest Physicians which is holding its 27th annual meeting in New York, June 22-26, just prior to the A.M.A. session.

The program, first ever sponsored jointly by the two medical organizations, will consist of symposiums, panel discussions, the reading of scientific papers, roundtable luncheon meetings, and fireside conferences.

Subjects to be covered will include new approaches in the treatment of various forms of heart disease; tuberculosis in general hospitals; steroid treatment in lung diseases; modern diagnostic measures in heart disease; pulmonary diseases and the best forms of treatment; asthma; chronic bronchitis and emphysema; heart catherization; recent advances in the treatment of cardio-pulmonary diseases; modern treatment of angina due to stress or effort, and x-ray findings in heart and chest diseases.

Moderators of the symposiums and panels will be Drs. Arthur M. Master, New York; Sol Katz, Washington, D. C., and George C. Griffith, Los Angeles.

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Letters To The Editor

Sirs:

. . . I think this 25th Anniversary Year issue is a wonderful one. I particularly enjoyed the editorial, "Things To Come," with its fine concluding paragraph.

I also noted with satisfaction Item C, page 39 of the report of the December meeting of the House of Delegates.

GEORGE D. BURNS, M.D.

Derby, Conn.

February 9, 1961

Dear Sir:

I would like to take this opportunity to compliment you on the memorial article concerning Dr. McGuire. I did not know the man but I thought that the article was beautifully done and the sentiments expressed would certainly be a tribute for any of us to strive to deserve.

I thought enough of your article to take it home and read it to my family, a first as far as I was concerned.

Sincerely,

WILLIAM E. GATLIN, M.D

Middletown, Conn.

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Book Reviews

THE DOCTORS OF YALE COLLEGE, 1702-1815. By Herbert Thoms, M.D. Published by The Shoestring Press, Inc., Hamden, Conn., 1960. 199 pp. $6.00.

Reviewed by Denis S. O'Connor

It is particularly fitting that this work about the doctors of the early days of Yale College should appear as Yale celebrates the sesquicentennial of its founding and the inauguration of the Department of the History of Science and Medicine.

Dr. Thoms' long-time interest in local medical history makes him particularly well qualified to author this volume.

While medicine in the early days of our country was not as demanding as it is today one is amazed by the wide range of interests and multiplicity of disciplines the students of those days were able to encompass.

To be doctor and minister was most common and to be scientist, agriculturist and educator was not too unusual.

The influence exerted by these men not necessarily because they were doctors but rather because of their high intellectual attainment should be a source of pride to anyone in the medical profession and a stimulation to those of us who today are so satisfied to stay within the narrow confines of medicine.

It is to be hoped that this volume will be followed by others recording the great names in medicine which have emanated from Yale or who have figured in her history.

This book should be of interest to anyone who has an interest in colonial history, especially medical and educational.

This is one for a permanent place in any library and a reference work far into the future.

A PRIMER OF ELECTROCARDIOGRAPHY. Fourth Edition by George E. Burch, M.D. and Travis Winsor, M.D. Lea & Febiger, Philadelphia, Pa., 1960, 273 pp. $5.00.

Reviewed by Louis H. Nahum

This excellent primer for beginners has retained only the well established concepts while omitting the controversial ones. Nevertheless, some controversial ones are of extreme importance in basic theory and help students more easily recognize events taking place in various regions of the heart such as the surface interference theory which merits some discussion for a beginner and is not mentioned in this book. And so we find the electrocardiogram interpreted as interference between potentials from the inside and outside of the heart althought much evidence exists that concellation of endocardial and myocardial potentials is extensive and surface potentials for the most part determine the surface field. One might expect in a primer an analysis of the surface field function since this is basic and should be the first jumping off for the beginner into electrocardiographic principles.

Having said this the reviewer is impressed with the beautiful drawings and excellent format of the book as well as the simplicity with which the complicated problems are made clear to the reader. Artefacts are explained so is the nature of recording. There are five chapters one on Principles of Electrocardiography. Chapter Two is devoted to an analysis of various components of the electrocardiogram and their clinical significance. Chapter Three deals with Precordial leads. Chapter Four with Disorders of the Heart beat. Chapter Five with Clinical Applications of the Electrocardiogram. At the end is an appendix containing trioxial reference system, normal invariant measurements, and diagnostic Electrocardiographic criteria for normal and abnormal tracings.

In terms of conventional electrocardiographic theory and practice this book is probably the best one can begin with. Unfortunately, there are no references to direct the reading of the beginner, but this is not a fatal defect since they can easily be obtained in more advanced books and particularly new textbooks of physiology and books on cardiovascular dynamics.

THE DOCTOR ENJOYS SHERLOCK HOLMES by Edward J. Van Liere, Published by Vantage Press, Inc., New York 1, N. Y., 141 pp. $3.00.

Reviewed by Denis S. O'Connor

In this series of essays, the author with his medical background has undertaken to analyse Conan Doyle's medical knowledge for accuracy and one must conclude that Doyle comes off very well.

Sherlock Holmes' devotees will enjoy these essays. The format is such that it could be slipped into a coat pocket to be enjoyed when the doctor, as so frequently happens, finds himself waiting in the hospital, on a train, in court, or in a railroad station with time on his hands.

THE PHYSIOLOGICAL BASIS OF DIURETIC THERAPY by Robert F. Pitts, M.D., Professor of Physiology and Biophysics, Cornell University Medical College, New York. Charles C. Thomas, Publisher, Springfield, Illinois, 1959, 295 pp.

Reviewed by Louis H. Nahum

In reading over this book it is obvious that we are entering into an era of the science of medicine. It was but an empiric art years ago when few drugs were available and the therapy largely supportive, rested upon the confidence of the patient on his doctor. Of necessity treatment was symptomatic and psychological. It is still a mystery how the doctor really could have enjoyed his art in the absence of rationally applied therapy. Certainly he must have missed the excitement and intellectual satisfaction that comes from an understanding of the mechanisms of disease.

What did the physician have with which to treat dropsy before the present scientific era? He had digitalis, zanthines, potassium chloride, fluid restriction and at times purgation by calomel. Today, he has purified digitalis, glycosides salt free prepared foods to limit sodium intake, increasing varieties of diuretic drugs to facilitate the elimination of edema. But he has much more, he has available knowledge of renal physiology, a more complete knowledge of patho-physiology of edema, a better appreciation of the possible mechanisms of diuretic action. Because of all this he is in a position to deal rationally with edema and feel the excitement and intellectual satisfaction of applying rationally the means of overcoming the problem. It is very likely that this pleasure and intellectual excitement will be carried over to the patient and a physician-patient relationship will be cemented more solidly than ever it was in the era when medical practice was an empiric art.

It is true even today, because of lack of time to digest voluminous literature which has grown up on renal physiology, on fluid and electrolyte metabolism, on the mechanisms of diuretic drug actions, that physicians are forced into the habit of practicing somewhat empirically. This book can change all this for its contains in summary all he needs to know about edema and its rational treatment.

Part I provides a background of basic information concerning the distribution of water and electrolytes within the body, the mechanism of regulation of volume and composition of the body fluids and the abnormalities of function which result in the formation of edema. From this the author goes on to present the renal mechanisms of salt and water content of the body in greater detail. A number of revolutionary new concepts are brought in such as tubular reabsorption of water and electrolytes. The electrolytes are brought in by "sodium pumps" while water is reabsorbed as a result of osmotic forces.

Part II begins with functional classifications of diuretics and goes on to discuss the mechanisms of action of each in sequence. Not only is attention paid to those presently in successful use, but mention is made of those which may prove to be harbinger of the diuretics of the future and also those which have helped us to under stand renal function. This part ends with a discussion of certain general complications of diuretic therapy especially hyponatremia and potassium deficiency and how to overcome these serious complications of strenuous diuretic therapy. Each section is followed by a summary which the author has included for the "casual reader" but also by a bibliography of selected articles. Some are reviews from which the student can obtain a more extensive bibliography.

This book will stand as a model of the medicine of the present and the future. It epitomizes the passing of an era, empiricism, and the ushering in of a new, experimental medicine. With it will come greater intellectual pleasure in practice, greater benefits for the patient and a firmer foundation for the close relationship between doctor and patient.

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ACTIVITIES OF THE NAUGATUCK VALLEY MEDICAL SOCIETY

Editor's Note: The program of activities of the Naugatuck Valley Medical Society represents an excellent example of what local city and area medical organizations should do. It is hoped that other local societies throughout the State will endeavor to copy some of the public activities of N.V.M.S. and in that way do much to create a favorable "doctor image" in their area.

Although existant for many years, the Naugatuck Valley Medical Society was incorporated in the State of Connecticut in December 1957 with an initial membership of thirty. Today, the membership has grown to forty-five with twenty-two general practitioners, and twenty-three specialists.

Its purposes have been to foster better local relationships, protect common interests, and improve medical practice among its members, most of whom are also members of the New Haven or the Fairfield County Medical Associations.

A ladies auxiliary was formed in 1958 and has worked closely with the society, aiding in manning polio clinics, contributing to society events, volunteering aid to hospital and district nurse activities, and offering much encouragement to the society.

The Naugatuck Valley Medical Society has been an active participant in organized medicine at the grass roots level. One Connecticut State Medical Society councilor and two board of governors' members are drawn from its ranks. It has successfully petitioned statewide action on ethical telephone listing. It has provided and publicized a local medical panel in keeping with the State Society's recommendations. It has written and telegraphed all of Connecticut's Senators and Representatives to the U.S. Congress each year supporting the A.M.A. and Connecticut State Medical Society principles on legislation pertaining to health care.

Under the leadership of its four past presidents: Ralph Edson, Jack Galen, Wilbur Hansen and John Hoffer, the Naugatuck Valley Medical Society has been active in the service of the community. Its members have provided staff and clinic services to the District Nurses Association in its TB testing program, expectant mothers educational program, well-child conferences, and yearly immunization clinics; actively represented medicine by participating in nearly all of the many local lay organizations and clubs; and has sponsored community wide polio immunization clinics for the past four years.

In 1957, under the leadership of John M. Renehan, the Naugatuck Valley Medical Society initiated its dollar polio clinics, with those unable to pay receiving injections free of charge. Every dollar charged has been held in trust in a scholarship fund for use in providing college scholarships to local high school graduates in the scientific field of their choice. At present, three students are currently being so aided in three different colleges and a fourth will be chosen this spring. To date thirty-eight community wide clinics have been held with a total of 23,000 immunizations administered, and an active program of eight scheduled clinics for 1961 has already begun.

Financial aid from general funds have also been provided over the past four years to forty-eight needy children and to two student nurses. Aid, medical care and guidance have been given to many community organizations including ambulance groups, youth groups and the scouts.

The monthly business meetings held at near-by restaurants have featured more than thirty speakers from varied walks of life on a variety of subjects. For the past year and a half, four meetings a year have been "program nights," devoted to either a special topic or a special group. Joint meetings of lawyers, dentists, the clergy, and other community groups have predominated on "program nights."

Attendance rates have averaged 60 per cent to 70 per cent of the membership. The frequent social events include, in conjunction with the auxiliary, an annual society picnic in June, an annual society Christmas party, and an annual auxiliary dance. From among the membership, a twenty-seven man investment club, called the Ambyopic Investment Club, was formd in July 1958, which also includes two annual social events to which the entire membership is invited. An eighteen man society bowling league operates during the winter months. The Society and its auxiliary have taken bus trips to sporting events; have toured drug plants; and currently are planning two day-long outings and drug company tours for late spring.

An active public relations program has resulted in an excellent mutual relationship with the press. The community has been kept well informed on State Board of Health recommendations, on A.M.A. and Connecticut State Medical Society policies, and on specific local issues. The crash program for polio immunization in the summer of 1959 and the 50th anniversary celebration of the local hospital spear-headed by the members of the society, were both well received by the press and community alike.

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CHEMOTHERAPY OF BREAST CANCER

Jeanne C. Bateman, m.d., *Washington, D. C.*

It has been stated that statistics can be manipulated to demonstrate almost any desired conclusion. Today we are being barraged by cancer statistics, most of which center around the magic words "the five year cure." To the doctor this term means "no demonstrable tumor at five years." To the patient it usually implies complete eradication of his cancer. When signs and symptoms recur, as eventually happens in about 2 out of 3 cancer victims, despair sets in.

We are now in an era which bears some resemblance to the early days of insulin. It must have been somewhat shocking at first to realize that this wonderful agent was palliative only. True also for liver extract in the treatment of pernicious anemia and digitalis in the treatment of congestive heart failure. However, as the physician learned to administer these agents on a maintenance basis and to tailor the dose to the needs of each particular patient, he was enabled to return countless individuals to a useful life. These advances could be achieved only by accepting the fact that diabetes, pernicious anemia and most heart diseases are chronic incurable conditions.

Today we do not have a cancer cure in the real sense of the word. We do not know the cause of this disease. If, however, we could gear our thinking to regard cancer as a chronic disease instead of a fatal terminal state unless completely burned or cut out, both the patient's and the doctor's morale would improve. There are a growing number of ways in which many uncured cancers can be treated and we have the right to anticipate not only more anticancer agents but also a true cure in the not too distant future.

Our object, then, is to keep the patient ahead of his disease so that:

1. His management will not destroy him financially or psychologically.
2. He may have a good and useful survival.
3. He may live to die by some other disease.

The specific subject of our discussion is mammary carcinoma. Next to skin cancer it is the most common neoplasm. The standard accepted primary forms of treatment for this tumor are surgery and/or X-radiation. The over-all five year survival rate since 1950 is 50 per cent for white women and somewhat lower for non-whites (39 per cent).[1] Broken down to those with localized disease and those with regional metastases it is 72 per cent and 42 per cent respectively. In spite of earlier diagnosis and more extended surgical procedures this represents only a 2 per cent improvement over pre-1950 statistics. It is of interest that approximately 20 per cent of women having mammary cancer will survive 5 years with no form of therapy. Nine patients seen by us had breast lumps for 5-10 years prior to seeking help.

It is not within the scope of this discussion to compare the relative merits of simple mastectomy, radical mastectomy, postoperative X-ray treatment, etc. However, Deaton reviewed the data on 2,955 patients from 6 series who had a 54 per cent five year survival rate following radical mastectomy as compared to a 59 per cent five year survival rate in 808 simple mastectomies from 10 series.[2] The data regarding X-ray treatment is likewise controversial.

We are still left with an almost 50 per cent five year survival failure and this is the group of patients which concerns us. Why are they failures and what can we do about them?

Tumors spread by (1) contiguity, (2) via lymphatics and (3) via the blood stream. Erosion or invasion of small venous channels in a tumor site is followed by showers of cancer cells or tumor emboli. This process is most common in areas of constant motion as in lung tumors. This phenomena is accelerated by trauma or manipulation. That the number of circulating cancer cells is markedly increased during surgery was nicely demonstrated by Cole and his associates at the 7th International Cancer Conference in 1957.[3] During that same year Smith reported the isolation of cancer cells from wound washings made at the time of surgery and attempted to correlate the local recurrence rate with these findings. The growing interest in this problem is apparent by the increasing number of articles concerning it. Obviously most of the shed cells die and do not become implanted. Unfortunately it probably takes only one viable tumor cell to start a metastatic focus in a patient. The chance of producing implants in experimental animals has been demonstrated to be related to the total number of circulating cancer cells. Reduction of implants has been achieved in animals innoculated with tumor cells by treatment with various mustard drugs.[5] Clearing of circulating cancer cells in human patients has also been achieved by similar methods.

It is possible to measure roughly the rate of growth of a tumor by estimating the time a metastatic lesion takes to double in size, and this can be done for pulmonary metastases.

Now if we extrapolate backwards to the time that metastatic site consisted of one tiny cell it becomes obvious that a grossly invisible metastatic lesion was present in some cases prior to the time of initial surgery. In a situation such as this *no* local form of primary treatment such as surgery or X-radiation could have been curative.

The doctor presently is faced with three main problems in cancer and they are:

I. What to do for the patient with metastatic cancer.

II. What to do with the so-called inoperable case.

III. How to improve present statistics.

I. WHAT TO DO FOR THE PATIENT WITH METASTATIC CANCER

In 1896 Beatson performed bilateral oophorectomy on three women with extensive inoperable fungating breast cancer.[6] There was impressive regression of growth in one of the three cases. Since then the role of hormones in cancer has aroused increasing interest. A paradoxial situation exists today in that the same disease is treated by removing the source of a given hormone in some cases and in other cases by giving massive doses of that same hormone. Attempts to correlate effectiveness of treatment with status of the vaginal epithelium have been frustrating.[7] Yet, enough success has been achieved with hormone therapy to stimulate continuing effort along this line.

It should be noted:

1. There is no sure way of predicting which type of hormone therapy will be most effective in any given case.
2. Response to hormone therapy, if achieved, is time-limited.
3. Tumor acceleration is a definite risk.
4. Side effects may be distressing and dangerous.

Hormone therapy can be additive or ablative.

Additive hormone therapy consists in the administration of estrogens, androgens or corticosteroids. The ablative procedures include oophorectomy, adrenalectomy and hypophysectomy. No type of hormone therapy is of value in the presence of liver or brain metastases.

Castration by surgical or X-ray procedures may be *prophylactic* or *therapeutic*. It has become almost standard practice in some areas to prophylactically castrate all premenopausal women following mastectomy. This in spite of the fact that there is no well controlled large series of cases demonstrating phophylactic castration to be desirable procedure. It does have the disadvantage of adding a second psychological trauma to a patient who has just suffered a disfiguring operation. It also prematurely expends a possibly useful therapeutic procedure for future recurrence of disease. *Therapeutic* castration for *metastatic* mammary cancer is employed in premenopausal and up to two years post-menopausal women. Objective regression in 13 to 40 per cent of the patients for an average of nine months has been achieved. Patients who fail to respond to oophorectomy may be considered to have a hormone independent tumor and are not likely to respond to other forms of endocrine therapy.

Estrogens should be used only in patients who are 5 years or more past the menopause. Objective remissions will be obtained in approximately 35-50 per cent of patients with soft tissue lesions other than liver or brain. Ulcerated lesions in older women may show good healing for varying lengths of time. Average duration of response to estrogen therapy is 8 months. Side effects to be watched for are malaise, gastrointestinal distress, vaginal bleeding and (especially in older women) congestive heart failure due to increased blood volume associated with fluid retention. Stilbestrol 15 mg. or ethinyl estradiol 2-3 mg. daily by mouth or estradiol benzoate 5 mg. by injection 3 times weekly may be employed.

Androgens can be used at any age. Twenty to twenty-five per cent of patients so treated show objective improvement for an average duration of 7.5 months. Side effects include distressing masculinization, increased libido and not infrequent severe or fatal hypercalcemia. Testosterone propionate 50 to 100 mg. intramuscularly 3 times weekly or fluoxymesterone 20 to 30 mg. per day orally may be employed.

If a patient on androgen or estrogen therapy shows evidence of progressive disease at the end of 3 to 4 months hormone therapy should be promptly discontinued.

Cortisone in doses of 200-400 mg. daily has been reported to produce objective remission in 30 per cent of patients for an average of three months. This dose cannot be maintained due to attendant serious side effects.

Adrenalectomy and *hypophysectomy* have had rather wide trial as therapeutic procedures for the treatment of metastatic mammary carcinoma. The operative and postoperative mortality runs from 6 to 10 per cent for adrenalectomy and probably higher for hypophysectomy. In addition the latter procedure, which may be achieved surgically or by various irradiation techniques, carries the hazard of rhinorrhea, severe headache, meningitis, loss of smell, permanent visual disturbance and polyuria. Adrenalectomized and hypophysectomized patients are fragile beings and must be maintained on replacement hormones. About 30 per cent experience objective regression of disease for approximately 6 to 12 months although an occasional longer response has been reported.

The use of *X-ray therapy* as a palliative procedure especially for bone metastases should be mentioned. Very short courses will alleviate bone pain and halt destructive processes which may result in incapacitating fractures. Any patient who has had a mastectomy for mammary cancer and who develops persistent bone pain should be suspected of having osseous metastases and treated promptly. X-ray evidence of bone metastases may not appear until 3 to 4 months after onset of pain. However, it should be remembered that when bone metastases occur the patient must be considered to have generalized carcinoma and some form of systemic therapy also should be considered.

Attention now will be turned to the chemotherapy of cancer with chemical agents. The historical background of chemotherapy is interesting.

During World War I it was noticed that victims poisoned by Yellow Cross War Gas, namely sulfur mustard, developed severe hematopoietic depression as well as deep tissue burns. The possibility that controlled application of this agent might favorably affect leukemia or solid tumors suggested itself. In 1931 Adair and Bagg[8] treated a small group of patients with local applications and in one case local injections of a solution of the gas. Results were promising but the chemical was extremely difficult to handle. Interest waned until World War II when the gas was re-evaluated and the derivative nitrogen mustard was developed. By 1946 papers on clinical trials began to appear. Since that time, according to Dr. Shimkin, of the National Cancer Institute, approximately 100,000 drugs have been tried on animals having experimental tumors and about 100 compounds have been given clinical trial in man. Unfortunately, all but a very few are too toxic to be of practical use.

Most of these compounds fall into three main classes: The *first* group consists of the antimetabolites. These include: (1) compounds presumably affecting de novo synthesis of purines and pyrimidines such as the folic acid antagonists aminopterin and methotrexate, (2) compounds presumably affecting incorporation of purines and pyrimidines into nucleic acid, an example of which is 5-fluorouracil, (3) compounds presumably acting as amino acid antagonists, and (4) compounds possibly acting as antimetabolites as urethane and the actinomycins.

Group II contains the polyfunctional alkylating agents which are highly reactive compounds that attack nucleoproteins by combining with various of their component radicals as carboxyl, phosphoryl or amino groups.

This group includes nitrogen mustard, triethylene melamine, nitromin, triethylene thiophosphoramide, cyclophosphamide, myleran, chlorambucil and others.

Group III includes general cell posions as arsenic, benzine, colchicine and the polysacharides.

This list is obviously incomplete and only intended to indicate the general types of compound which have shown promise. Regardless of its type a good anticancer drug must have certain qualifications to be of practical value. It should have:

1. Anti-tumor effectiveness.
2. Long action.
3. Minimal or absent clinical toxicity.
4. Ready solubility.
5. Adaptability to various routes of administration.
6. Predictable hematologic effect.
7. Toleration by host for indefinite periods.

The most common toxic effect of our presently available anticancer drugs is that of bone marrow depression. The effect on the white blood cells, the red blood cells and the platelets separately varies somewhat from drug to drug. Some of the Chemicals have a predictable and fairly consistent action on the hematopoietic system and one single test such as a white blood cell count can be used as a guide to dosage. It should be remembered that up to a point the bone marrow will recover automatically and if therapy is given at spaced intervals this point is not over-reached. Furthermore, it is not generally recognized that most of these drugs are excreted by the kidney and any decrease in renal function such as that related to physiological aging, shock, severe debility, chronic cardiovascular disease or intrinsic kidney disease will cause prolonged retention of drug with resultant increase in drug effect not only on the hematopoietic system but also on the tumor. A pretreatment blood urea nitrogen determination is always useful and its elevation should immediately suggest starting therapy with a lower than usual dose. From then on the blood count can be the guide. Of course, the appearance of bleeding phenomena as petechiae is a sign to withhold therapy temporarily. Anemia is much harder to judge since uncontrolled cancer itself is one of its commonest causes. It might be pointed out that extensive invasion of bone by metastatic tumor such as is seen in some cases of breast and prostatic carcinoma also will produce pancytopenia. Control of cancer is the object and adequate therapy is frequently achieved only at the price of some blood depression. However, if we respect and understand these effects as we respect and understand the effect of insulin on the blood sugar we can give our advanced cancer patients the benefit of useful medications.

Many of the available anticancer drugs also have undesirable effects on the gastrointestinal tract such as nausea and vomiting, oral ulceration and some of them have a nasty way of causing alopecia. It is difficult to persuade a patient to return for repeated treatment when these things happen. Fortunately not all of the available anticancer drugs do all these things.

It has often been said that cancer becomes resistant to presently available drugs. If this is really true I am at a loss to explain some of our long controls. In our clinics we assume that advanced cancer is not curable by chemicals in spite of the fact that we have a number of patients who have shown no evidence of recurrence following initial regression of proven metastic disease while on maintenance chemotherapy.

In addition to the importance of maintaining chemotherapy indefinitely, the importance of concentrating drug at tumor sites has assumed growing significance. Studies with radioactive tagged drug have corroborated the clinical impression that about half of the *locally injected* drug will pass quickly into the vascular system, thus permitting administration of a larger and more effective dose of drug and of obtaining a local as well as a systemic action. Furthermore, there are a number of metastatic sites such as the pleura, pericardium and relatively avascular soft tissue nodules where it is impossible to administer an effective antitumor dose except by *local* administration.

Time does not permit a review of even the few drugs available for clinical chemotherapy. The side effects of some antimetabolites such as 5-fluorouracil are distressing enough to discourage maintenance therapy. Methotrexate has recently been used with dramatic results by the intra-arterial perfusion method. This is a procedure which, unfortunately, requires prolonged hospitalization, which cannot be repeated and which is not curative.

Alkylating agents such as nitrogen mustard which are vesicant in action are impractical for local injection even into a serosal cavity where a fibrinous reaction results. Appreciable risk of alopecia such as is encountered following 5-fluorouracil and cyclophosphamide (cytoxan) is also undesirable. Nitromin, cyclophosphamide and triethylene thiophosphoramide all can be administered locally. The high incidence of nausea and vomiting produced by nitromin make it generally unacceptable for maintenance therapy. The largest group of patients in our clinics have been maintained on triethylene thiophosphoramide because this drug in our experience is easy to handle and also clinically almost nontoxic. We have encountered mild nausea rarely. The hematopoietic effect is generally predictable. These factors permit effective management of patients on an outpatient basis at weekly or longer intervals. The following cases are examples of maintenance chemotherapy with triethylene thiophosphoramide (TrioTEPA).

J. J., a 41 year old woman, was seen first in December 1953 at which time she presented herself with an ulcerated proliferative tumor which had destroyed the left breast and had metastasized to subcutaneous tissue, supraclavicular and axillary nodes and to the sternum. She had had no previous therapy. After a course of transfusions administered because of severe anemia, the patient was discharged from the hospital to the clinic where she received weekly injections of triethylene thiophosphoramide into the breast tumor. There was a slow drying and regression of the tumor, weight gain and spontaneous further improvement of the anemia. By April 1954 the tumor had almost disappeared, there was regression of satellite nodules and disappearance of regional nodes.

Serial biopsies demonstrated first a flourishing adenocarcinoma, five weeks later cloudy swelling of cytoplasm, vacuolization of cytoplasm and pykinosis of nuclei and ten weeks later a very sick cancer indeed. Pretreatment x-rays showed osteolytis destruction of the upper sternum which four months later had a restored cortex. The patient had returned to work and was living a relatively normal life. J. J. was our first patient on this type of maintenance locally injected chemotherapy. Not knowing where to go we stopped treatment. The patient returned some three months later with signs of progressive disease. Just as with a second bout of congestive heart failure it was a little harder to achieve control this time.

Because of the promising results achieved in the case of J. J. a series of patients with advanced metastatic breast cancer were started on a maintenance program using triethylenethiophosphoramide as our chemotherapeutic agent. In November 1959 the experience with 252 such patients was summarized.[9] Definitive surgery had been performed in 163 patients from one to six times; 21 individuals had been operated for bilateral mammary tumors. Courses of x-ray therapy in this group ranged from one to five times; many had received hormone therapy of various types. All were out of control when first seen by us.

Subjective evaluation of response is difficult in any form of treatment for a chronic disease. Objective response and duration of survival, therefore, were used as criteria for efficacy of therapy.

The lesions seen included original tumor, ulceration, inflammatory lesions, nodes, nodules, pulmonary, hepatic and intracranial metastases and serious cavity effusion. One can anticipate an overall 60 per cent objective response rate to adequately administered drug. Regression is not always complete and varies from lesion to lesion in the same individual. It is probably related to drug concentration achieved at a given site which in turn is related to the vascularity of the site. In other patients there is not infrequently a slowing of progression accompanied by improved well-being.

Survival in this group of patients was plotted on a semilog graph and it was apparent that survival is significantly better than that seen in a similar group of cases taken from the Connecticut State Statistics who were treated by conventional procedures only. Of course, mere prolongation of survival is a limited objective. The majority of these chemotherapy patients in addition were rehabilitated to the extent that they resumed or continued much of their prior activity; many were able to enjoy vacations, etc. A few more examples can be given.

E. R., a 65 year old lady in 1952 received x-ray therapy for an ulcerated carcinoma involving the upper inner quadrant of the left breast. In 1953 ulceration recurred and a mass over the sternum appeared. From February to November 1953 the patient was treated with stilbesterol. Temporary improvement was followed by loss of control. When seen in March 1954, there was an ulcerated tumor of the left breast with a large adjoining suprasternal mass. Local injections of triethylenethiophosphoramide were given at one week, then at two and then three week intervals. Marked regression was noted by six weeks and no evidence of tumor was present one year later. Unfortunately she was lost to follow up at this time.

H.C. was a 45 year old woman who had had a left radical mastectomy in 1949 followed by a postoperative x-ray therapy. In 1952 she received x-ray therapy for a pulmonary metastases. From January to March 1953 stilbestrol was administered in an effort to control recurrent pleural effusion. Hormones then were discontinued and chemotherapy was instituted. Following withdrawal of fluid a solution of triethylenethiophosphoramide in doses much smaller than those presently employed was introduced. It might be mentioned that this form of treatment for pleural effusion secondary to pleural metastases from either mammary or ovarian carcinoma is not only the more effective but also the most easily managed of any therapeutic procedure was know. In spite of the small doses of drug employed in this case, the pleural effusion was soon controlled and therapy had to be administered by other routes. The patient returned to her job as an elevator operator, at which she continued for almost two years when she expired from intra-abdominal metastases.

R. L., a 29 year old mother of two small children, in August 1953 had a wedge resection of a left breast cancer followed by x-ray therapy. In August 1954 a right radical mastectomy was performed for a second primary cancer. In 1955 the patient developed clumsiness, weakness of an arm and double vision. A diagnosis of intracranial metastases was made by a consulting neurologist. X-rays demonstrated metastases to the lung and to the ileum. Intravenous therapy with triethylenethiophosphoramide was instituted. Wihin a few weeks the patient was driving her own car because she now "saw only one road".

Two months later there was regression of the pulmonary lesions and they had almost disappeared in another two months at which time the osteolytic lesion in the ileum had also healed. Unfortunately the patient was permitted a fairly long vacation. Control was lost and she died nine months after institution of therapy for cerebral metastases.

M. R., a 49 year old lady was first seen in March 1954 at which time bloody pleural effusion contained cancer cells and needle biopsy of two large chest wall metastases demonstrated cancer cells. She had had a left radical mastectomy five years previously, following which yearly recurrences were treated with x-ray or surgical excision. Triethylenethiophosphoramide was administered into the pleural space following taps or into the chest nodules at weekly intervals for one month. The patient then disappeared and was not seen again until December 1955 when she returned because of a small local recurrent nodule. The nodule again regressed with further chemotherapy. This was one of the most responsive breast tumors we have seen.

E. Z., was a 47 year old school teacher, mother of two children, who had a right radical mastectomy in 1951 followed by postoperative x-ray therapy. In 1955 the patient developed cough, dyspnea, dysphagia and weakness. Physical examination demonstrated pleural effusion, auricular fibrillation and a supraclavicular node. The patient was started on maintenance chemotherapy with triethylenethiophosphoramide given first by the intrapleural route and subsequently by local or intravenous injection. The pleural effusion regressed and the cardiac arrhythmia reverted to normal. This patient continued to teach school for four years when increasing respiratory embarrassment resulted in demise. At postmortem examination the cancer was found to be limited to 2 or 3 small hepatic nodules but x-ray fibrosis had destroyed the right lung.

The dose schedule of triethylenethiophosphoramide (Thiotepa) recommended for patients with far-advanced cancer, such as the foregoing cases, is as follows:

ROUTES	INITIAL DOSE	MAINTENANCE†	INTERVAL
Intratumor*	45-60 mg.**	5-60 mg.	1-4 weeks‡
Intravenous	25-30 mg.**	5-25 mg.	1-4 weeks‡

* Includes intrapleural, intrapericardial, transabdominal, intrahepatic.

** Lower dose in all patients with slowed renal excretion related to age, severe debility, chronic cardiovascular renal disease, shock, etc.

† Dose determined by pre-treatment white blood count. Dose decreased in the presence of falling WBC. Dose omitted for WBC of 3,000 or less.

‡ One week interval for first year.

The supplemental therapy which completed the program for total care included:

1. Antibiotics which were employed only in the presence of signs and symptoms of infection. Leucopenia itself was not considered an indication especially when the patient was out of the hospital.

2. Transfusions with whole blood or red blood cells were administered when the hemoglobin dropped to seven grams per cent; sooner if the anemia was symptomatic.

3. Steroid hormones were used for asthenia, i.e., decrease in strength, appetite and well being. They tended also to counteract the hemolytic process which is associated with advanced neoplastic disease.

Preferred were:

Cortisone 12.5 or 25 mg. by mouth twice daily combined with a long-acting adrenocorticotropic hormone in doses of 40-80 units given intramuscularly once or twice weekly.

4. Vitamins except for ascorbic acid were avoided unless a specific deficiency existed. Vitamin B_{12} and and folic acid were routinely avoided because of a possible tumor accelerating action.

On this program it has been possible to avoid all but very mild pain medication. Percodan (a hydrocodeinone preparation) has been most useful and permits a patient to work. Moderate amounts of tranquillizing agents are useful. However, once a patient has become addicted to morphine or its equivalent, rehabilitation is almost impossible.

II. WHAT TO DO WITH SO-CALLED INOPERABLE CASES

All doctors occasionally see the patient with a far-advanced inoperable breast tumor who has delayed seeking help because of shyness, fear, or because she has observed others quickly die following cancer surgery. X-ray therapy is used in this type of patient, not infrequently with impressive local results only to have the patient die soon thereafter with distant metastases. In many cases limited surgery with simultaneous institution of maintenance chemotherapy can be used. The surgery removes a nursing problem; chemotherapy is useful in destroying local residual disease as well as in controlling distant metastatic implants.

The data on 11 such patients only two of whom had had previous therapy (x-ray in one and Hoxsey in another) was summarized. There was ulceration in 7, fixation to skin with impending ulceration in 4, bleeding in 2, a large axillary mass in 9, edema of the arm in 2, lung metastases in 3, bone metastases in 2 and hepatic metastases in 1. A limited radical procedure was done in one, a simple in nine and local excision in one. Chemotherapy with triethylenethiophosphoramide was begun one to ten days prior to surgery in 4, at the time of surgery in 7, and subsequently administered at 1-4 week intervals to hematopoietic tolerance. There was good healing in all cases. Two patients are alive at normal activity at 18 and 51 months; 9 patients expired in 0.4 to 12.0 months. Causes of death were pulmonary embolus 1, congestive heart failure 2, (brought on by failure to take prescribed digitalis in one), and cancer 6. One case is given in detail.

L. F., a 59 year old woman, noticed a lump in the right breast in the Fall of 1954; by September 1955 it had ulcerated and the patient was forced to quit her job. When first seen in February in 1956 there was a proliferative, ulcerated, infected 20-cm. mass covered with foul smelling exudate and located above the right nipple. Culture revealed a pyocyaneous infection sensitive only to dihydrostreptomycin which was administered. On February 12th, fifty mg. of triethylenethiophosphoramide were injected into the right breast. On February 14th local excision of the mass was achieved and closure of the defect was done on March 3rd. The patient had weekly injections of drug into the region of the scar for approximately one year following which time the interval was gradually increased to four weeks. The patient returned to work shortly after her operation and has no evidence of cancer today, four years and eight months after institution of chemotherapy.

III. HOW TO IMPROVE PRESENT STATISTICS

The growing concern regarding cancer cell dissemination at the time of surgery as a factor in the high recurrence rate has resulted in various therapeutic approaches. It will be some time before there is general agreement on the most effective drug and the most effective method of management. However, it seems reasonable in mammary cancer patients to use an agent with demonstrated ability to regress implanted disease. Since Shields Warren[10] reported that circulating cancer cells in animals became fixed extravascularly within 4-6 hours it seems desirable to use an agent at the time of surgery when the greatest number of cells appear in the blood stream. One dose of drug injected into the site of surgery might be expected to simultaneously sterilize the wound area and the blood stream. We now recommend a dose of 60 mg. of Triethylenethiophosphoramide in the average patient and use 45 mg. in the debilitated patient. Other non-vesicant drugs as cytoxan may be used in the same way.

Our observations include 22 patients, in 17 of whom a radical mastectomy was done while a simple mastectomy was performed in four elderly women. Five patients had positive nodes, a finding which we now consider an indication for a course rather than a single dose of drug. The doses of drug in these patients varied somewhat in amount and route of administration. There has been no evidence of distant metastases in 21 cases at 6 to 48 months with an average of 27 months. One patient required x-ray therapy for a local recurrence at 21 months post operatively. She is free of disease at 39 months. One patient expired at five months with extensive hepatic metastases which in retrospect are considered to have been present at the time of surgery. Although several more years must elapse before this study can be fully evaluated, the early results appear promising.

In summary, chemotherapy not only offers the hope of improving the ultimate outlook for the operable cancer patient, but also it may render the inoperable cases operable. In addition, a program of properly managed chemotherapy will help many so-called hopeless cancer patients to live useful and comfortable lives for prolonged periods.

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THE WORLD'S FAIR OF MEDICINE

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WILMS' TUMOR IN CONNECTICUT

JAMES F. GLENN, M.D.,* *New Haven.*

THE Tumor Registry of the Chronic Disease Control Section, State Department of Health, offers an unparalled opportunity for the analysis of data relative to malignant diseases. Since 1935, the State of Connecticut has maintained accurate records of all malignancies diagnosed in the state, including exhaustive followup studies.[1] The statistics thus made available allow examination of total community experience with neoplasia. Such a unique situation exists in no other area. Collective experience in a given group or hospital, or the combined experience of a selected number of such institutions, have been analyzed in regard to Wilms' tumor; however, the diagnostic, therapeutic, and prognostic aspects of Wilms' tumor have not been studied prior to this survey on an epidemiological basis.[2]

WILMS' TUMOR

Wilms' Tumor is the second most common malignancy of childhood, being exceeded in frequency only by neuroblastoma.[3] It was first described as a pathologic entity by Wilms in 1899,[4] though prior reports of isolated cases of renal tumors in children had been made. The confusing histologic picture encountered in these and subsequently reported cases led to wide variation in nomenclature, the literature abounding in such descriptive terms as adenosarcoma, embryoma or embryonal sarcoma, chondromyosarcoma and so on. For the sake of convenience, the term "Wilms' tumor" was adopted generally, though Deming prefers the term "nephroma" since the tumor generally contains all the elements of the normal kidney.[5]

Histologically, Wilms' tumor appears to be of embryonic mesodermal origin, containing abundant malignant connective tissue with interspersed glandlike tubules, cords and strands of epithelial cells. Occasionally there are structures resembling glomeruli, muscle, or cartilage.[6] Growth is by extension in the early phases, though subsequent invasion and metastases are noted. Metastatic spread is usually via the blood stream, and the lungs are the most frequent site of distant spread, with abdominal viscera and bones the next most prevalent sites.

Clinically, Wilms' tumor is virtually limited to the first seven years of life, though cases have been reported up to and including the eighth decade.[7] The tumor presents with the usual triad of renal tumor symptomatology; mass, pain, and hematuria. An abdominal mass is by far the most common initial symptom and finding, though fever, hypertension, distention and ileus, anemia, anorexia, nausea and vomiting, leucocytosis and an elevated erythrocyte sedimentation rate are also seen quite often.[8]

The differential diagnosis of Wilms' tumor, an urgent necessity from the standpoint of therapy, must be made on the basis of identification of other abdominal masses of childhood—primary hydronephrosis, polycystic or multicystic disease, splenomegaly, renal tuberculosis, adrenal tumor or hemorrhage, hepatomegaly, inflammatory masses, and cysts or tumors of the retroperitoneum or pelvic organs. Because of its greater frequency, neuroblastoma arising in the retroperitoneal space is most often mistaken for Wilms' tumor. The most helpful single diagnostic tool is the pyelogram — either intravenous or retrograde — which characteristically discloses a distorted and displaced but functioning kidney.

Strong clinical suspicion of Wilms' tumor justifies prompt surgical exploration for removal of the renal mass. Considerable controversy has centered upon the therapy of Wilms' tumor, but it now appears conclusive that the ideal treatment consists of some combination of surgical extirpation and irradiation; it is further probable that prompt surgery followed by intensive multiport roentgen therapy is the treatment of choice. Since the tumor is highly radiosensitive, excellent palliative results may be expected of radiotherapy.

The prognosis and survival of patients with Wilms' tumor, whatever the mode of treatment, is not good, though it may be better than the prognosis of other types of kidney tumors.[9] Two-year survival rates following diagnosis and treatment of Wilms' tumor are most often quoted, and may range up to forty-odd percent. However, recurrences and metastases may be noted many years after initial therapy, and it is therefore more practical to consider five-year survivals when speaking of potential cures. The five-year survival of patients with known Wilms' tumor is generally less than 20 per cent irrespective of therapy.

EPIDEMIOLOGICAL EXPERIENCE

Connecticut experience with Wilms' tumor during twenty-five years, 1935-1960, has been thoroughly analyzed. The data may be considered highly significant by comparison with other isolated series reported. Eighty-six pathologically proved cases of Wilms' tumor are documented by the Tumor Regis-

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try, representing an incidence of approximately two new cases per million per year, based upon a calculated average population of about two million. There were forty-four female patients and forty-two males; four of the patients were Negroes. Patients ranged in age from two months to eighty-three years; sixty-four patients were six years old or younger, and nineteen patients were less than two years of age.

Since competent medical care and treatment facilities exist in all parts of the state, the diagnosis and management of these eighty-six cases were provided by various physicians and institutions. Twenty-two hospitals were involved in treatment of these cases; the numbers of patients treated as well as the overall uncorrected survivals are noted in Table I. There are twenty-one survivors in the entire group, an uncorrected rate of 24.4 per cent, disregarding cause of death or interval after diagnosis.

The discovery of an abdominal mass was the precipitating cause of diagnosis in the majority of cases as noted in Table II. Abdominal pain or tenderness were also frequently noted. Less frequent, but prominent, were complaints and findings of vomiting, distention, fever, and anorexia. Hematuria of a gross character was not a frequent complaint. Family physicians and pediatricians were first to note the presence of the tumor mass in almost one-half of the cases, while the parents or patients themselves noted the mass in over one-third of the instances. Urologists and radiologists were first to locate the tumor mass in only twelve of the eighty-six patients. The tumor occurred in the left kidney in forty-seven cases, the right kidney in thirty-eight cases, and bilaterally on one occasion.

TABLE II

SIGNS AND SYMPTOMS IN 86 CASES OF WILMS' TUMOR

Intial symptoms (if simultaneous, more than one listed)		
Mass in abdomen	33	(38.4%)
Abdominal pain	28	(32.6%)
Nausea and vomiting	19	(22.1%)
Anorexia	15	(17.4%)
Fever	12	(13.9%)
Gross hematuria	11	(12.8%)
Abdominal distension	11	(12.8%)
Weight loss	8	(9.3%)
Obstipation	8	(9.3%)
Frequency or nocturia	6	(7.0%)
Eneuresis	2	(2.3%)
No symptoms noted	9	(10.5%)
Positive findings on initial examination		
Ileus or distention	13	(15.0%)
Flank or abdominal mass	74	(86.1%)
Abdominal tenderness	16	(18.6%)
Fever	10	(11.6%)
Chest dullness	4	(4.7%)
Dilated abdominal veins	4	(4.7%)
Metastatic mass	4	(4.7%)
Hypertension	3	(3.5%)
Negative examination	3	(3.5%)
Individual first noting tumor mass		
Family physician	28	(32.6%)
Parent or guardian	26	(30.2%)
Pediatrician	13	(15.0%)
Patient	7	(8.1%)
Urologist	6	(7.0%)
Radiologist (incidental)	6	(7.0%)

TABLE I

WILMS' TUMORS IN CONNECTICUT HOSPITALS 1935-1960

HOSPITAL	CASES	SURVIVORS
Grace-New Haven Community	23	9
Bridgeport	7	2
Hartford	6	3
Middlesex (Middletown)	5	0
St. Francis (Hartford)	5	0
New Britain General	5	0
St. Raphael's (New Haven)	4	1
Stamford	4	2
Waterbury	4	1
St. Mary's (Waterbury)	4	0
St. Vincent's (Bridgeport)	3	0
Manchester	2	2
Lawrence and Memorial (New London)	2	1
William W. Backus (Norwich)	2	0
Charlotte Hungerford (Torrington)	2	0
Windham Community (Willimantic)	2	0
Griffin (Derby)	1	0
Day Kimball (Putnam)	1	0
Danbury	1	0
Litchfield County (Winsted)	1	0
Meriden	1	0
Norwalk	1	0
	—	—
Total	86	21

In Table III the laboratory findings are tabulated. Records of laboratory data are unfortunately incomplete, but indicate a high incidence of hematuria (generally microscopic), anemia, and leucocytosis. An elevated sedimentation rate, regarded as a poor prognostic sign, was noted in over half of the patients in whom this study was performed.

Radiographic diagnosis of Wilms' tumor is by far

TABLE III

LABORATORY FINDINGS RECORDED IN 86 CASES OF WILMS' TUMOR

Urinalyses Recorded		64
Hematuria (microscopic or gross)	31	
Albuminuria	10	
Pyuria	3	
Normal urine	33	
Hematologic Findings Recorded		69
Anemia (Hemoglobin less than 10)	43	
Leucocytosis (WBC over 10,000)	43	
Elevated sedimentation rate	12 of 21	

Table IV

Radiographic Diagnosis in 86 Cases of Wilms' Tumor

No radiographic studies recorded		1
Plain roentgenogram of the abdomen		85
Mass visualized	52 (61.2%)	
Intravenous pyelography		69
Renal displacement or deformity	41 (59.4%)	
Nonfunctioning kidney	18 (26.1%)	
Poorly functioning kidney	8 (11.6%)	
Inconclusive or nondiagnostic	5 (7.2%)	
Calcification in tumor mass	2 (2.9%)	
Retrograde pyelography		16
Diagnostic of tumor	14 (87.5%)	
Suggestive of tumor	2 (12.5%)	
Radiologic examinatiton of the chest		65
Metastases present	12 (18.5%)	
Metastatic series (including chest)		32
Metastases (other than chest)	5 (15.6%)	

the most accurate method of differentiation. The tabulations of Table IV indicate that intravenous and retrograde pyelograms carry a high index of diagnostic reliability. It is interesting that in over one-fourth of the cases, intravenous pyelograms disclosed the affected kidney to be non-functioning. Metastases were radiographically demonstrable in approximately one-sixth of the patients when they were first seen.

Treatment of the eighty-six cases reported here was accomplished with the same variety noted in other series. The majority of patients, however, received combined surgical-roentgenological therapy; twenty-nine underwent surgery and post-operative irradiation, eleven were irradiated and then operated, and nine patients had surgery with both pre-operative and post-operative irradiation. As seen in Table V, twelve patients (generally terminal) received no treatment, seven had irradiation only, fourteen were treated with surgery alone, and four patients received chemotherapy (folic acid antagonists, nitrogen mustard, and steroids) in addition to surgery and irradiation.

Table VI outlines the surgical treatment employed. Surgery other than nephrectomy is not considered as primary therapy of the tumor in the classifications of therapy modes above. It should be

Table VI

Surgical Treatment Employed in 86 Cases of Wilms' Tumor

No surgical treatment employed		19
Nephrectomy		67
Transperitoneal approach	22	
Flank approach	20	
Approach not stated	25	
Node dissections		4
Transperitoneal	3	
Thoracolumbar	1	
Laparotomy and biopsy only		10
Other surgery employed		10
Laparotomy for recurrence	4	
Lobectomy for metastases	1	
Biopsy contralateral kidney	1	
Resection recurrent tumor	1	
Distant node biopsy	1	
Lysis of adhesions	1	
Appendectomy	1	

Table V

Wilms' Tumor Survival Related to Treatment

(Figures in parentheses indicate patients alive and well July 1960)

	MODE OF TREATMENT						
LENGTH OF SURVIVAL FROM TIME OF DIAGNOSIS	NO TREATMENT	IRRADIATION ONLY	SURGERY ONLY	PRE-OP XRAY AND SURGERY	SURGERY AND POST-OP XRAY	PRE-OP XRAY, SURGERY, AND POST-OP XRAY	SURGERY, IRRADIATION, CHEMOTHERAPY
Less than 3 months	4		3	2	2		
3 to 6 months	3	1	2	2 (1)	5	3	1
6 to 9 months	1	2	1	3	5	1	2
9 to 12 months	2	2	1	1	3 (2)		
12 to 18 months		1	2			1	
18 to 24 months				1		1	1
2 to 3 years	1				3	1	
3 to 4 years					2 (1)		
4 to 5 years			1 (1)		2 (2)		
5 to 6 years		1			1 (1)		
6 to 8 years			1 (1)		3 (3)		
8 to 10 years					2 (2)		
10 to 15 years			2 (2)		1 (1)	2 (2)	
More than 15 years	1		1	2 (2)			
Totals	12	7	14 (4)	11 (3)	29 (12)	9 (2)	4
Two-year survival	16.7%	14.3%	35.7%	18.2%	48.3%	33.3%	0%
Alive and well 5 yrs.	0%	0%	28.6%	18.2%	24.1%	22.2%	0%

noted that ten patients underwent only exploration and biopsy; this is not considered therapy. Determination of operability has not been analyzed, since criteria of operability obviously vary widely.

Irradiation treatment of Wilms' tumor, determined as accurately as possible from the tumor records, is broken down in Table VII. A total of sixty patients were treated with irradiation, the average patient receiving about 3000 roentgens (air dose) through two ports in one or two courses of therapy. Dosimetry was usually recorded as air dose, the exact tumor dose calculation rarely stated. Since the existence and availability of high-voltage apparatus has been limited in Connecticut, it may be justifiably assumed that most therapy was given with standard low-voltage machines.

TABLE VII
IRRADIATION THERAPY IN 86 CASES OF WILMS' TUMOR

No irradiation therapy employed		26
Total patients receiving irradiation		60
Total irradiation (air dose) all sites		
Less than 1000 r	2	
1000-2000 r	8	
2000-3000 r	10	
3000-4000 r	12	
4000-5000 r	8	
More than 5000 r	17	
Dosage unknown	3	
Number of courses of therapy		
One	31	
Two	21	
Three	3	
Four or more	2	
Unknown	3	
Number of portals employed		
One	6	
Two	24	
Three	14	
Four or more	8	
Unknown	8	
Additional therapy to distant sites		
Lung	6	
Skeleton	2	
Neck	1	
Contralateral kidney	1	

The majority of patients who died may be assumed to have died of causes directly attributable to Wilms' tumor (Table VIII). Autopsy reports are available in twenty-three of the sixty-five deaths. Three patients in the series died of unrelated causes (pneumonia, cerebral vascular accident, and another primary carcinoma, respectively).

TABLE VIII
CAUSES OF DEATH

Patients alive and well		21
Death		65
Autopsy reported	23	
No autopsy obtained	42	
Causes of deaths (clinical and pathological)		
Not definitely determined		25
Carcinomatosis		19
Intestinal obstruction		6
Renal failure		5
Operative death		4
Pneumonia		3
Anemia		1
Cerebral vascular accident		1
Other carcinoma		1
TOTAL		65

TABLE IX
AGE AT DIAGNOSIS CORRELATED WITH SURVIVAL AND DURATION OF SYMPTOMS BEFORE DIAGNOSIS

AGE GROUP	AGES AT DIAGNOSIS		GROUP TOTAL PATIENTS	SYMPTOM DURATION BEFORE DIAGNOSIS 0-1 WKS	1-2 WKS	2-4 WKS	4-8 WKS	OVER 8 WKS	GROUP TOTAL SURVIVORS
Newborn to 2 years	Newborn to 6 months	6	19	11	3	1	2	2	11
	6 to 12 months	7							
	12 to 18 months	4							
	18 to 24 months	2							
2 years to 6 years	2 to 3 years	11	45	19	10	5	4	7	8
	3 to 4 years	12							
	4 to 5 years	17							
	5 to 6 years	5							
6 years to 20 years	6 to 8 years	7	12	3	1	1	2	5	1
	8 to 10 years	3							
	10 to 14 years	2							
	14 to 20 years	0							
Over 20 years	20 to 30 years	2	10	0	0	0	2	8	1
	30 to 40 years	1							
	40 to 60 years	3							
	Over 60 years	4							
ALL AGES	TOTALS		86	33	14	7	10	22	21

Survival is further elaborated in Table IX, as well as in Table V. The best survival rate was noted during infancy, the period corresponding to most prompt diagnosis. Poorer survivals, irrespective of therapy, may be noted in the older age groups in which there are almost universally a greater delay in diagnosis and treatment.

Relating survival to therapy employed, it is seen that the combination of nephrectomy and post-operative irradiation provided the best results with nearly one-half of these patients surviving two years and almost one-fourth surviving five or more years. Surgery alone also provided impressive survivals at both two and five years. Seventeen of the eighty-six patients in this series survived for five years or more; three of these died of unrelated causes, and fourteen are still living and well. Thus, the five-year "cure" rate in this series may be said to be 19.8 per cent in contrast to a two-year "survival" rate of 31.4 per cent.

DISCUSSION

The present series of eighty-six cases of Wilms' tumor, while still a small number, is impressive in size when compared to the small numbers of cases reported from various hospitals and institutions. Other reports deal with the experience in a given group, while cumulative surveys have the advantage of greater numbers of cases but still represent only collective isolated experience. This report of Wilms' tumor in Connecticut may be interpreted as representative of total community experience with this malignancy, assimilating cross-sectional data from a variety of hospitals and physicians related to diagnosis, therapy, and prognosis. Such a study is therefore of value from an epidemiological standpoint.

The incidence of Wilms' tumor in Connecticut—nearly four new cases per year in a population of two million—probably corresponds to statistics from the Mayo Clinic where these tumors accounted for one in every twenty-five thousand admissions.[10] In the present study there appears to be no significant difference in sex incidence; the small number of Negroes in the series might be anticipated on the basis of the small Connecticut Negro population; and laterality of the tumor is probably not significant, though there were more cases involving the left kidney. The age incidence in this series corresponds to other experience, the peak occurring in the first seven years. There were a number of older patients, however, three of these in the seventh decade, and one patient in the ninth decade autopsied with Wilms' tumor proven. This eighty-three-year old man is probably the oldest patient on record with a known Wilms' tumor.

It has frequently been emphasized that the abdominal mass accompanying Wilms' tumor is most often recognized by the parents. Here, however, it is seen that family physicians and pediatricians — those responsible for routine examination of the patients — most often accounted for discovery of the mass. This fact reemphasizes the importance of careful periodic examination of infants and children.

In other studies, hypertension, fever, anemia, leucocytosis and pyuria have all been more prominent than in this study.[11] The paucity of blood pressure recordings in the available records makes it impossible to evaluate the importance of the hypertensive factor in prognosis in this group of patients.[12] While gross hematuria was an exception in this survey, as in other studies,[13] microscopic hematuria was found in almost one-half of the patients on initial examination; it thus appears that microhematuria is a very important index in diagnosis.

Variations in mode of therapy in this group of patients corresponds quite closely to the general pattern of treatment, as indicated in an extensive survey of surgeons around the country who expressed a preference for surgery followed by irradiation (4 per cent) or both pre-operative and post-operative irradiation combined with nephrectomy.[14] Additional chemotherapy of Wilms' tumor is still experimental and cannot be avaluated.[51] Secondary irradiation as well as secondary surgery — lobectomy, node dissection, excision of recurrent tumor—may have limited but beneficial application, if only in a palliative sense.

According to this analysis, survival of patients with Wilms' tumor may be dependent upon a number of factors, most of which are self-evident: early diagnosis, prompt treatment, and effective combined therapy. It appears that the younger patients have a brighter prognosis, perhaps a reflection of the fact that many Wilms' tumors seem to have fetal origin, lying dormant for varying periods of time until some undetermined stimulus precipitates further growth. Certainly in this series infants under two years of age enjoyed a better prognosis than the older patients.

It is notable and commendable that the two-year survival rate among these Connecticut patients was significantly better than those quoted by Harvey[16] in a survey of over four hundred cases; i.e., 21.5 per cent as contrasted with 31.39 per cent in Connecticut. Perhaps most interesting is a comparison of survival rates in Connecticut with the rates quoted from Boston Children's Hospital some years ago; Gross and Neuhauser[17] startled urologists and pediatricians with a two-year survival rate of 47.3 per cent following prompt surgery and post-operative irradiation. In the present study, twenty-nine patients so treated in community hospitals enjoyed a two-year survival of 48.3 per cent; the overall uncorrected survival in this group is 41.4 per cent, and seven of these patients (24.1 per cent) are living and well without recurrent disease five or more years after diagnosis. It should be emphasized that these patients were treated not in centers, but at the community level, with extremely gratifying results.

With respect to survival rates and "cures", it seems much more reasonable to adopt a five-year followup as standard in the evaluation of results of Wilms' tumor therapy. Among the eighty-six cases analyzed, recurrences and deaths were common in the period between two and five years.. While recurrence or death due to Wilms' tumor was quite uncommon after five years. The overall five-year survival in this series was 19.8 per cent, irrespective of therapy. This survival rate, and particularly the survival following nephrectomy and post-operative irradiation, may lend considerable encouragement in the future treatment of Wilms' tumor, emphasizing the urgency of diagnosis and prompt therapeutic measures.

SUMMARY

Eighty-six proved cases of Wilms' tumor have been recorded in the Connecticut Tumor Registry from 1935 to 1960, an annual population incidence of about two new cases per year per million. Epidemiological analysis of these cases provides interesting clinical information related to diagnosis, treatment, and prognosis in this disease. Though a large number of institutions, physicians, and modes of therapy were involved in these cases, two-year survival of 31.4 per cent and five-year "presumptive cure" of 19.8 per cent are seen, very good results when compared with other surveys. The treatment of choice appears to be prompt nephrectomy followed by intensive irradiation. Early diagnosis and treatment, particularly in the older age groups, may significantly improve survival rates.

ACKNOWLEDGEMENTS

The author wishes to express appreciation to Dr. Richard C. Rhame for his assistance in compiling the data, and to the following people for their generous cooperation: Mr. John R. Keogh and Dr. Heinz S. Eisenberg, Chronic Disease Control Section, State Department of Health; Dr. B. Marvin Harvard and Dr. Mark A. Hayes, Yale University School of Medicine; and Dr. William Mendelsohn, Cancer Coordinating Committee, Connecticut State Medical Society.

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SPONTANEOUS HEMOPNEUMOTHORAX: A SURGERY EMERGENCY

Warren Zeph Lane, m.d., and Henry D. Minot, Jr., m.d., *Darien.*

Spontaneous hemopneumothorax has been a well-recognized syndrome since Rolleston[1] and Pitt[2] each reported a fatal case with autopsy in 1900. Each concluded that the bleeding came either from vessels of the ruptured emphysematous blebs or from torn vascular adhesions. Fry,[3] based on a review of 174 reported cases and on his own surgical observations, found disrupted adhesions to be twice as frequent as bleeding blebs. In many instances it was evident that spontaneous pneumothorax preceded the hemorrhage.

Without active treatment, the disorder is frequently fatal. Of the 40 cases reviewed in 1942 by Hartzell,[4] 21 proved fatal. Recently, with prompt surgical treatment, Rydell[5] was able to report salvage of 13 out of 14 patients treated between 1951 and 1959. The recommended surgical procedure is early catheter thoracotomy drainage of spontaneous pneumothorax to prevent rupture of adhesions and open thoracotomy if persistent hemorrhage occurs.

DIAGNOSIS

The average age is 28 years (Fry),[3] which is similar to that of ordinary spontaneous pneumothorax.

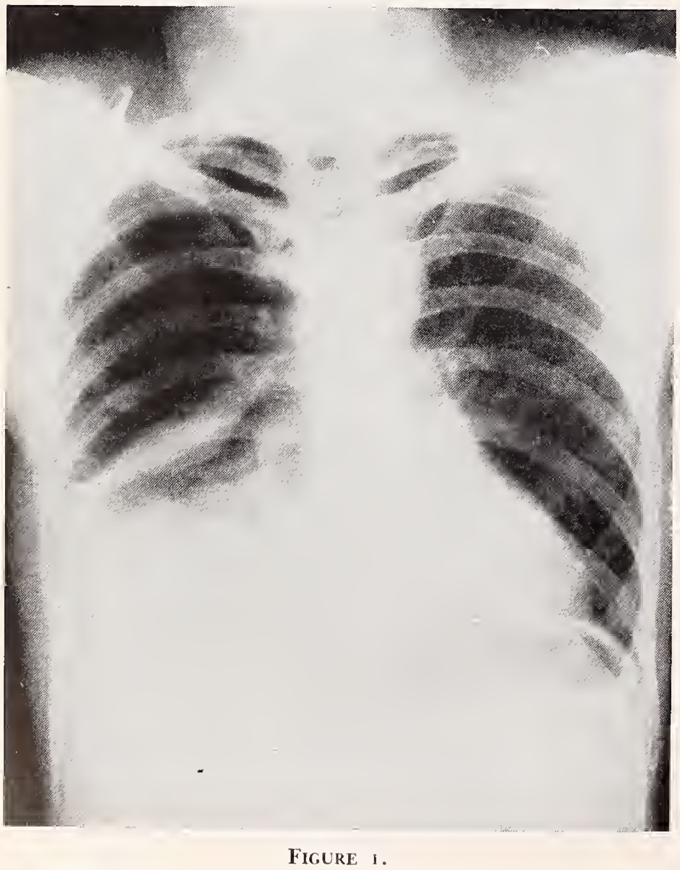

Figure 1.
Collapsed right lung due to pneumothorax, June 26, 1958.

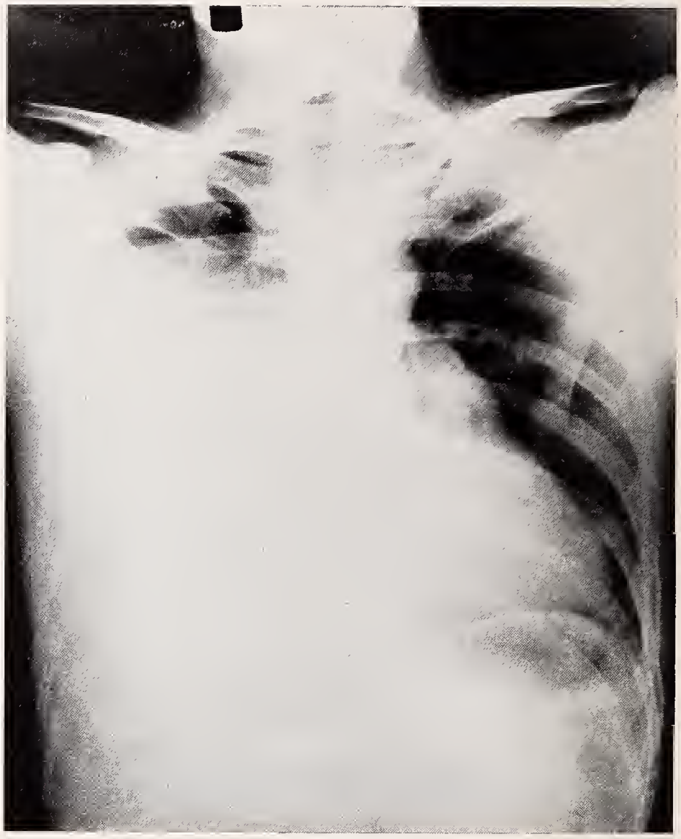

Figure II.
Hemopneumothorax just before surgery, June 27, 1958.

Males predominate (167 out of 174) (Fry).[3] At the onset there is severe chest pain which may simulate that of coronary artery disease or intra-abdominal pathology. Dyspnea is often present because of loss of function of the collapsed lung and because of blood loss. Shock is frequent. Diagnosis is confirmed by a characteristic X-ray appearance of hydropneumothorax and by aspiration of blood and air.

CASE REPORT

A 38-year-old white man was admitted to Norwalk Hospital on June 26, 1958, with a diagnosis of spontaneous pneumothorax based on characteristic history, physical findings and X-ray. (Fig. 1) Within 18 hours, he became languorous and dyspneic, and developed hypotension and rapid pulse. When seen by one of us (W.Z.L.), he was in severe shock and the hemoglobin had fallen to 3.5 gms. At the bedside a 22 F. Robinson catheter was immediately inserted into the right second anterior intercostal space under local anesthesia. Using 20 cm. of water suction pressure through a Gomco thoracic pump, 500 ml. of fluid blood mixed with

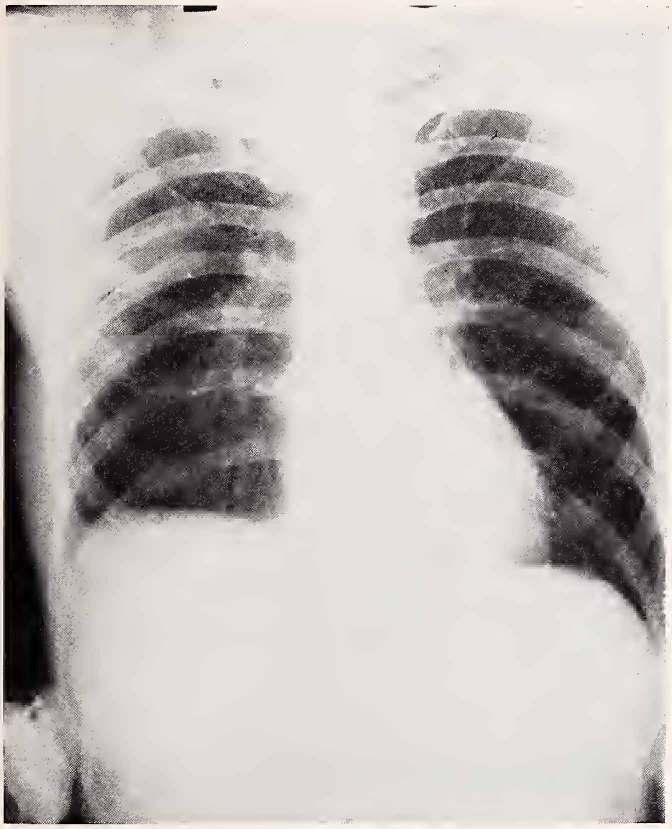

Figure III.
Three months later. Clearing nearly complete.

air was removed. Multiple transfusions of whole blood were given.

Although the catheter worked well, the lung had not expanded within 4 hours. It was evident that there must be either a large bronchopleural fistula or a large coagulum which could not be sucked out. X-ray was taken. (Fig. 2). Additional blood transfusion was administered and open thoracotomy performed in the operating room. Sufficient exposure was obtained without rib resection. There were 2500 ml. of clotted blood in the pleural space. There was an air leak from an emphysematous bleb in the apical segment, as well as bleeding from a torn adhesion in the parietal pleura. The adhesion was ligated. The ruptured bleb was excised after application of a non-crushing clamp, and the lung repaired with interrupted horizontal mattress and figure-of-eight silk sutures. The anesthesiologist reported immediate recovery from hypotension as soon as good lung expansion was achieved. The thorax was closed with a 38 F. Bardex (No. 710) catheter for suction drainage with a negative pressure of 15 cm. of water. The catheter was removed on the 5th post-operative day and the patient left the hospital on the 8th post-operative day. He has remained clinically well. Chest X-ray (Fig. 3) shows only slight residual pleural thickening.

SUMMARY

A case report is presented illustrating the excellent result which can be obtained by prompt recognition and surgical treatment of hemopneumothorax. Life-saving ligation of the torn vessel and excision of the ruptured bleb were possible, and prolonged treatment for hemothorax and possible fibrothorax avoided.

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SURGICAL TREATMENT OF ARTERIAL OCCLUSION IN THE COMMUNITY HOSPITAL

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The past ten years have seen rapid advances in materials and methods for surgical treatment of occlusions of the major arteries. Individual attempts at arterial repair, embolectomy and even intracardiac manipulation had been made prior to that time but the impetus to direct arterial surgery dates primarily from experience gained with large numbers of cases during war surgery (1945) (1951-52). Since that time increase in the knowledge of arterial disease, in techniques of endarterectomy[1, 2] and grafting,[3] and advances in graft materials[4, 5] have brought with them an ever increasing element of success.

The community hospital can provide surgery of this type if interested personnel are available. The present series consists in a report of the evaluation and treatment of 51 extremities with arterial occlusion in 34 patients seen by the author during a four year period, January 1, 1956 to December 31, 1959, in a community hospital of 200 beds serving a combined population area of approximately 80,000 people.

Work-up: The general appraisal of the patient with arterial occlusion is of utmost importance. These patients are elderly and may have multiple infirmities. Arteriosclerosis obliterans affects all parts of the cardiovascular system, centrally and peripherally. A careful history concerning the general health of the patient with special emphasis placed on cardiovascular, renal and cerebral symptoms is essential. Detailed history concerning the extremities is very important in order to determine the general course of the disease in this particular patient. Atherosclerotic arterial disease is, in general, progressive but, in specific, sudden in its onset. Very often a history is elicited of sudden decrease in walking ability or sudden onset of pain and discoloration. The length of time the presenting symptoms have been present coupled with the evaluation of the limb gives indication as to the efficiency of collateral circulation and may suggest the presence of open major arterial channels in some cases. A history of irregular pulse may aid in the diagnosis of arterial embolization as opposed to thrombosis on the basis of an atherosclerotic plaque.

The physical examination should be complete and especially detailed with reference to the cardiovascular system and peripheral vessels. It is apparent that irregularities of the pulse, signs of congestive failure, edema, etc., are important to note. The limbs should be inspected, palpated and an effort made to assess the general state of the peripheral arterial tree. Evaluation of the degree of arterial insufficiency is made depending on resting color and temperature, and responses to elevation and dependency. The presence or absence of proximal and distal pulsations should be assessed and evaluation made of the epicritic sensation of the extremities. Skin sensation is a very important determination and its absence over the distal portion of the extremity is indication of severe arterial insufficiency. Oscillometric readings may give valuable evidence as to site of occlusion. It is well to note that arterial pulsations may be increased just above a block. This may be seen especially in the popliteal artery with distal popliteal obstruction due to embolization or atherosclerosis. Palpation of the abdominal aorta for aneurysm, and examination to assess the strength of aortic pulse adds information as to the state of this vessel.

Laboratory work has, in general, been confined to necessary essentials. Complete blood count and urinalysis are done, with evaluation of the blood sugar and urea nitrogen if indicated and if time permits Electrocardiography is important for base line cardiovascular studies. Chest x-rays may be done pre-operatively if indicated.

Specialized diagnostic studies beyond the careful history, physical, and basic lab work have been those of contrast arteriography[6] and aortography.[7, 8] The technique has been quite simple and is well described. Fifty percent Hypaque has been used following testing for hypersensitivity; there have been no adverse reactions. Aortograms are done by the translumbar route in the prone position. Arteriograms are done percutaneously when pulses are palpable and open if they are not. Single filming technique has been used although it is recognized that serial filming would be more desirable. This change will be instituted when equipment become available. Arteriograms and aortograms are done in the x-ray department under local anesthesia, with the use of short periods of general anesthesia during dye injection in aortography. A recent modification of this technique has been made in performing open femoral arteriograms in the operating room on patients with aortoiliac occlusion immediately prior to surgery. This has proved to be an effective method of evaluating the distal tree while avoiding the use of aortography. The wound so placed for femoral arteriography is used also in the operative procedure as an adjunct in tunneling an aortofemoral or aortopopliteal graft.

Lumbar sympathetic blocks have been used on occasion in an effort to pre-operatively evaluate the effect of lumbar sympathectomy. This has not always been a valuable procedure. Positive findings of warming and improvement in color are valuable but there has been improvement with sympathectomy even with negative sympathetic block. The evaluation of the efficacy of the block and the difficulties of temperature studies without a constant temperature room are obvious.

Technique: Certain basic points in the operative procedures employed are worth mentioning. Major amputations in arteriosclerotic patients are performed with meticulous technique; the use of fine absorbable ligatures and atraumatic tissue handling. There has been avoidance of separation of skin from underlying fascia and strict adherence to sharp incisive dissection giving a clean stump. A definite attempt has been made in both the below and above-knee amputations to utilize equal length anterior and posterior flaps with the feeling that long flaps were prejudicial to healing in patients with severe arterial insufficiency. The scar thus placed over the end of the stump has caused no difficulty as end weight bearing does not occur in these stumps. A drain is used rarely, only if some oozing persists at time of closure, and is removed in twenty-four hours. These points of technique have been rewarding in achieving a high percentage of primary healing.

Lumbar sympathectomy has been performed in the semilateral position through a diagonal muscle splitting incision slightly below the twelfth rib. The sympathetic chain is removed from the point of its appearance in the crus of the diaphragm to the point of its disappearance below the common ileac vessel. Location of the sympathetic chain as it lies on the anteriolateral surface of the vertebral body has been facilitated by palpation and it is now routinely located in this manner. The firm sympathetic chain with its ganglion swelling is easily felt against the vertebral body and then may be visualized. Bilateral sympathectomy has been performed through two separate incisions, changing the patient's position between the two parts of the operation. Lumbar sympathectomy has been used as an adjunct to endarterectomy and by-pass grafting procedures in those cases where collateral circulatory stasis has occurred due to elapsed time since occlusion and in those cases where evident early gangrene of distal portions of the extremity has already occurred.

Thromboendartectomy procedures have been performed through longitudinal arteriotomy for the most part, and by transverse arteriotomy in some cases. The techniques of endarterectomy have been adequately described.[1,2] It has proved a valuable procedure; more especially in the terminal aorta and common iliac vessels but in some cases also in the femoral vessels. Its use as an adjunct to by-pass grafting in clearing a short segment of artery to facilitate the placement of the graft has proved increasingly valuable.

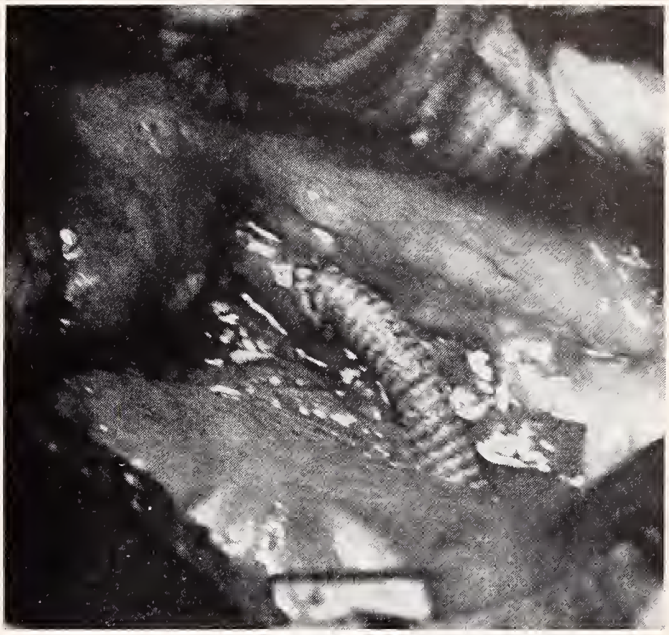

Figure I

End-to-side type of anastomosis of graft to popliteal artery which lies in depth of wound.

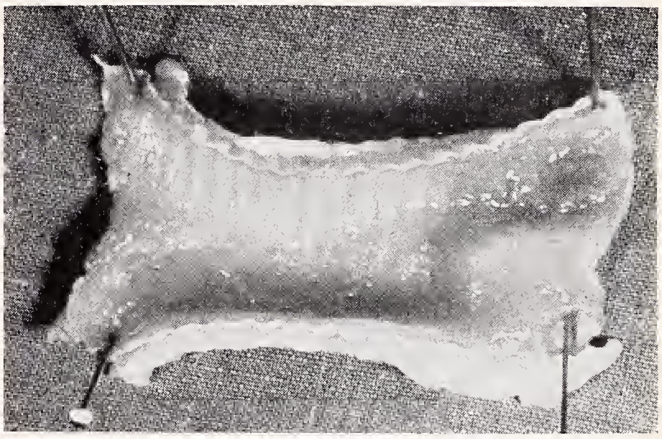

Figure II

Section of ilio-popliteal by-pass graft (teflon) removed after functioning four months. Closure due to aortic thrombosis. New pseudointima well shown.

By-pass grafting procedures[3] have been done with the crimped woven seamless synthetic arterial tubes, first with nylon and in the past year and one-half, with teflon.[5,9] This latter material has proved eminently satisfactory. It handles well, and although fraying of the cut ends has been reported by some surgeons, this has not been a problem to date. It does not require pre-clotting with the patient's blood. End-to-side anastomoses of graft to vessel have been used almost exclusively and there has been a definite attempt to use a graft slightly larger than the recipient vessel. (Fig. I and II). The long by-pass grafts such as those from aorta to popliteal artery are performed through multiple incisions—the graft being tunneled subcutaneously between popliteal space and inguinal incision. The use of the sigmoidoscope has proved very valuable in this procedure. Side-to-side anastomosis of graft to common femoral artery should be considered in the use of these long by-pass segments.

Anti-coagulant therapy has been used on specific indication. All distal vessels are filled with heparin solution during the operative procedure. However, total heparinization is carried out only if there appears to be eminent danger of closure of thromboendarterectomized segment or graft. In those few cases in which it was used it was given by constant intravenous drip for a period of four or five days. In two patients this was thought to be the factor in the good result; in two other patients bleeding from the popliteal wound occurred requiring the discontinuance of anti-coagulant therapy. Both patients had a successful result, however. Small rubber tissue drains should be used in wounds in the extremity where any oozing is present at closure. This is especially important if systemic anti-coagulation is employed. Drains can be removed in 24-36 hours.

The total series consists of 51 extremities with arterial occlusion in 34 patients who underwent a total of 62 operations. There were 21 male patients and 13 female patients. The average age was 69 years, for the male patients 68 years, and for female patients 72 years. Table I indicates the number of patients in each decade for each sex. The 62 operative procedures were 16 major amputations, 21 sympathectomies, 6 embolectomies, and 19 reconstruction procedures including 7 intimectomies and 12 grafts. There were three deaths within the post-operative six week period, all from myocardial infarction. These will be discussed in detail. It is a tribute to modern anesthesia and nursing care that 62 consecutive procedures, some of considerable magnitude, could be performed in this age group with a death rate within the six week post-operative period of only 4.8%

Age Distribution

Women—13

Age	Patients
40 - 50	1
50 - 60	0
60 - 70	4
70 - 80	5
80 - 90	3

Men—21

Age	Patients
40 - 50	2
50 - 60	1
60 - 70	7
70 - 80	8
80 - 90	2
Over 90	1

As this is a mixed group of all arterial occlusions seen, it of necessity includes extremes of age, condition, and degree of arterial insufficiency. It includes the gamut of embolic disease and of atherosclerotic occlusive disease from aorta to popliteal. No attempt has been made to classify cases as to specific pattern of occlusion in this small series of patients. For purposes of study and evaluation, the patients have been classified in two main groups determined by total evaluation of the pre-operative condition. These groups may be described as: I urgent or emergency, and II elective. Group I contains all limbs which by nature and severity of occlusion were facing imminent major amputation. Several types may be described in Group I. First, arterialemboli of major vessels; second, sudden thrombotic occlusions with loss of peripheral sensation and obvious impending gangrene; third, established gangrene of portion of foot with rest pain and/or spreading infection and no peripheral pulses; fourth, patients with intact skin but intractable rest pain requiring constant narcotic and unrelieved by any medical means. Group II. elective, contains primarily those patients with claudication and intact skin.

Group I.—Urgent Cases. The urgent or emergent group contains 40 extremities with arterial occlusion in 30 patients. There were 17 men and 13 women. Division of these patients has been made

Fate of 40 Limbs in Urgent Cases

Non-embolic Occlusions (29)

Treatment	Amputation 6	Sympathectomy 14	Endarterectomy (Femoral) 3	Graft 6	Totals 29
Limb Survival	0	10	2	4	16 (55%)
Limb Amputation	6	4	1	2	13 (45%)

Emboli (11)

Treatment	Arm Embolectomy 1 Non-operative 4	Leg Embolectomy 5 Non-operative 1	Totals 11
Limb Survival	5	4	9 (82%)
Limb Amputation	0	2	2 (18%)

into those with acute arterial embolization and those with atherosclerotic occlusive disease.

A. Emboli. There were eleven major arterial emboli in seven patients. Four patients experienced one embolus; two patients each had two emboli and one patient had three arterial emboli. Six of the emboli were to a lower extremity and five to an upper extremity. A study of these seven patients reveals that six of them were fibrillating on the basis of arteriosclerotic heart disease and were of an average age of 77 years with the youngest 64 and the oldest 89. The seventh patient was a 48 year old man with mitral stenosis and atrial fibrillation.

Embolization in the upper extremity was usually to the axillary artery, and was treated initially by stellate ganglion block and evaluation of the adequacy of collateral circulation. Of the five axillary emboli, four patients were treated with repeated stellate blocks and no embolectomy was done. Collateral circulation was adequate in these cases and functional limbs survived. In the fifth patient embolectomy was performed. Circulation to the limb was restored to normal. This patient was the oldest in the group of arteriosclerotic heart disease (89 years). The ease of performing embolectomy in the upper extremity under local anesthesia urges its use more often as primary and definitive therapy.[10, 11]

Arterial emboli to major arteries of the lower extremity were treated by immediate embolectomy except in one case where conservative treatment seemed warranted. Embolectomy was performd on five limbs with clots removed from the following locations: common iliac—1; common femoral—1; superficial femoral in adductor canal area—2; popliteal—1. Analysis of these results in lower extremity emboli shows the following: normal circulation was restored in the case of common iliac, common femoral and popliteal embolization. Both patients with emboli lodging in the adductor canal area were unsuccessfully operated upon and circulation could not be adequately restored. These patients required subsequent above-knee amputation. The local technical factors involved seemed to account for this difference in result. Emboli lodging in the adductor canal area do so because of advanced atherosclerotic disease present in this area of the superficial femoral artery. Successful embolectomy and restoration of circulation is therefore much more difficult. Future attempts in this area may involve insertion of by-pass graft if embolectomy seems unsatisfactory. This procedure was not done in the two cases here reported due to the following factors: one case occurred early in the series before this factor was appreciated; the second case involved a patient in critical condition who had suffered myocardial infarction at the time of embolization and who had emboli to two other major

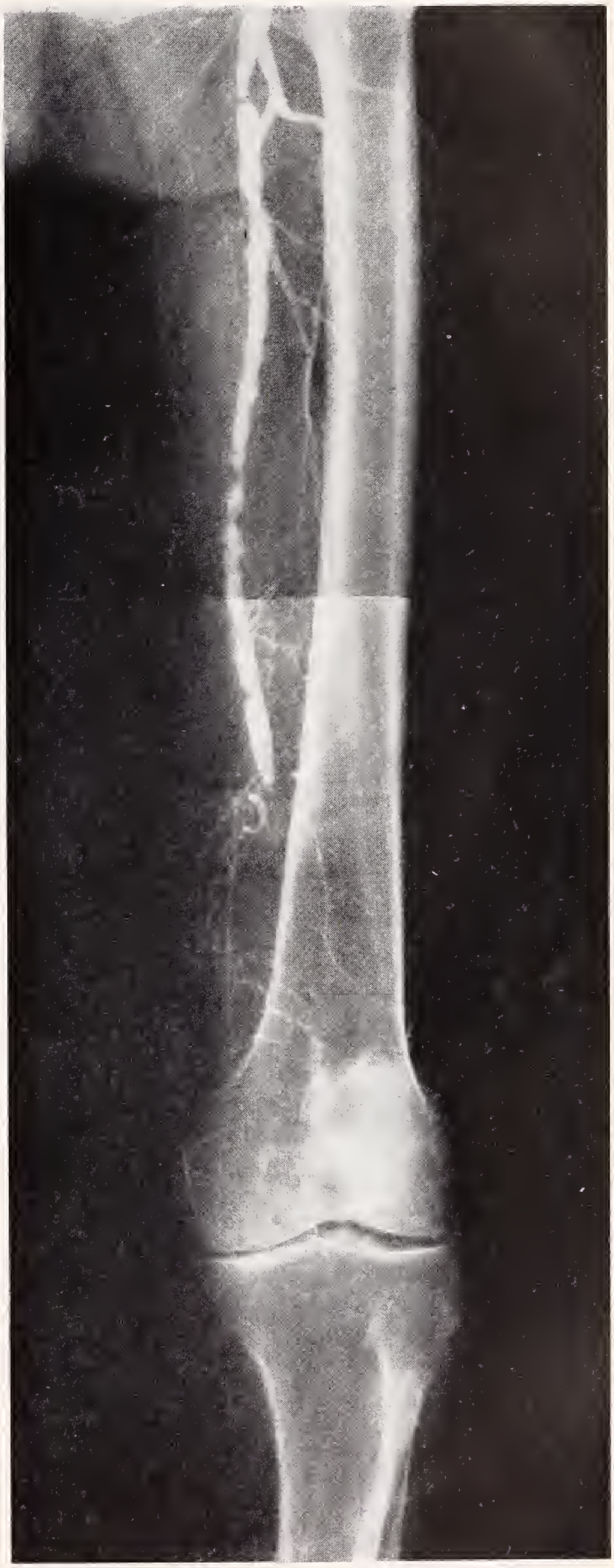

Figure III

Left femoral arteriogram showing severe atherosclerosis and occlusion at the adductor canal. No filling of popliteal vessel demonstrated on this or subsequent film. Direct surgery not indicated.

arteries. The lower extremity embolus treated conservatively occurred in an 89 year old woman who had sudden increase in existing moderately severe arterial insufficiency in one leg, one week following axillary embolectomy. Since the leg before embolization had no pripheral pulses successful surgery was thought impossible. Collateral circulation was adequate and the limb survived.

Results in the group of arterial emboli are these: five emboli to the upper extremity, treated conservatively in four instances and by embolectomy in one instance with survival of all limbs; six emboli to the lower extremity treated conservatively in one instance and by embolectomy in five instances with survival of four limbs and above-knee amputations in two. There were two deaths in this group as follows:

1. An 89 year old female who underwent embolectomy for axillary embolus and suffered popliteal or lower femoral embolization one week later, treated conservatively. Both limbs were intact when the patient died suddenly in bed two weeks following the last embolization. Post mortem examination was unobtainable.
2. An 85 year old female who suffered acute myocardial infarction and embolization to one axillary artery shortly before admission. The arm occlusion was treated conservatively with success. Twenty-four hours following this, the patient embolized to the left common iliac artery and to the right superficial femoral artery in the adductor canal. The common iliac embolus was extracted through the common femoral by suction with restoration of normal circulation. The adductor canal embolus was extracted with unsatisfactory return of flow and subsequent above-knee amputation. The patient died four days following amputation, eight days following embolization, of myocardial infarction.

B. Non-Embolic Occlusions. Non-embolic occlusions of urgent or emergency nature occurred in 29 extremities in 23 patients. There were fourteen men and nine women in this group, with an average age of 69 years. The course of treatment of these patients can be summarized as follows: six patients underwent primary above-knee amputation—in these patients evaluation for sympathectomy and/or possible direct surgery indicated that no improvement could be gained by either procedure. (Fig. III). All of these patients survived. None of these patients has walked on a prosthesis.

Fourteen patients were treated by sympathectomy. In this group ten limbs were improved and are still in use without serious difficulty, 1-3 years later. Two patients underwent subsequent above-knee amputation and two below-knee amputations. There were no deaths in this group. Both patients with below-knee amputations are walking with a prosthesis.

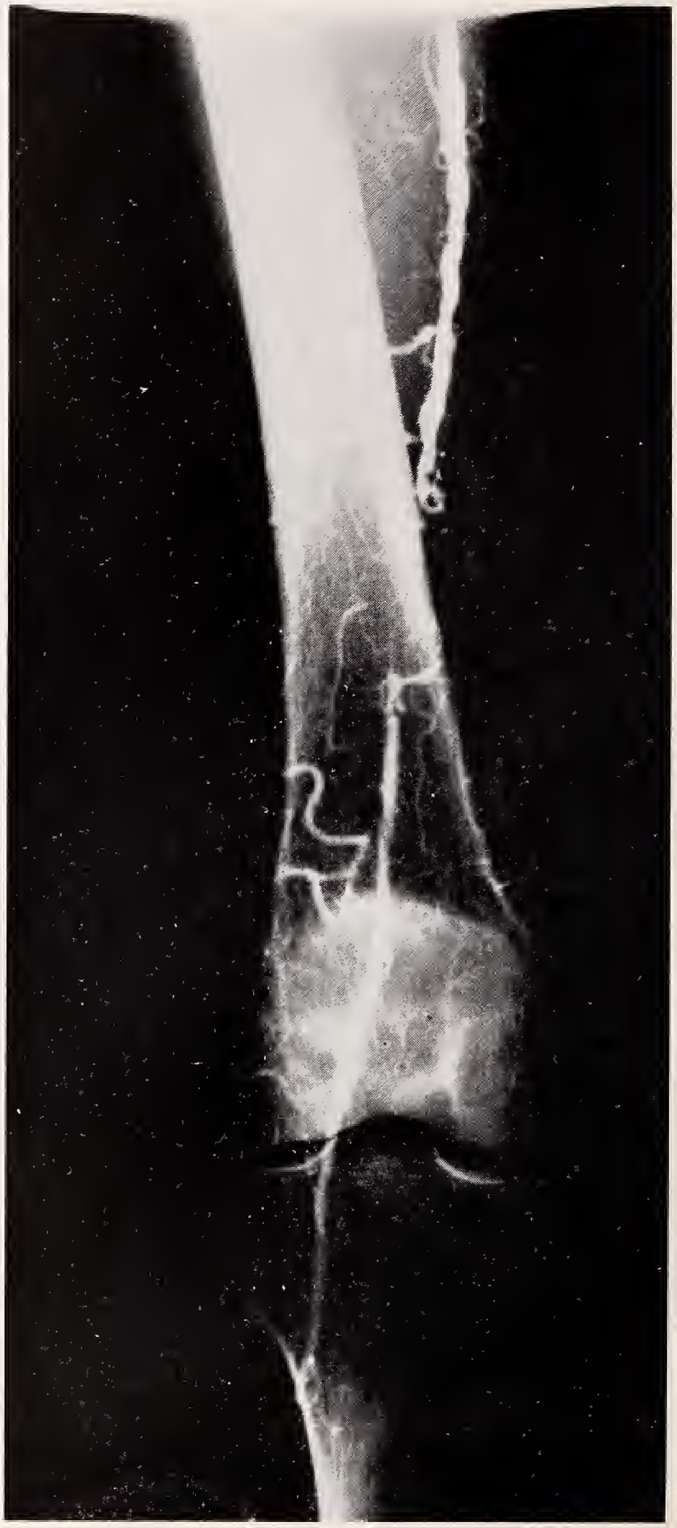

Figure IV

Short segmental occlusion in lower femoral artery—adductor canal area. Moderate atheromatous disease of remainder of vessel. Fair candidate for reconstruction. Thrombendarterectomy successfully done January 1958. Circulation maintained to present

Three patients were treated by femoral thrombendarterectomy. (Fig. IV). Two limbs survived with normal circulation for age (one pedal pulse present). One limb had simultaneous sympathectomy performed and required below-knee amputation. This patient is walking with a prosthesis.

Six patients were treated by the insertion of by-pass arterial grafts of synthetic material (teflon). One limb suffered closure of a femoro-popliteal graft in the immediate post-operative period and required above-knee amputation two weeks post-operatively. This patient died of myocardial infarction six weeks following amputation. One limb suffered closure of common iliac to popliteal graft four months post-operatively when thrombosis of terminal aorta and both common iliac arteries occurred. This patient required above-knee amputation of the grafted limb at that time.

Results in 29 extremities in 23 patients with non-embolic arterial occlusions, all of the lower extremities, were as follows: 13 patients underwent major amputation; 10 low-thigh amputations and 3 below-knee amputations. No patient is walking with an above-knee stump. All patients are walking with prosthesis on below-knee stumps. Sixteen limbs survived with functional circulation. There was one death in this group—a 70 year-old man who died of myocardial infarction eight weeks following arterial grafting; six weeks following subsequent above-knee amputation.

Group II.—Elective Cases. There were five patients whose problem was considered elective. In four of these patients both limbs were effected by aortoiliac disease; in the remaining patient one iliac artery was relatively open while the other was completely occluded. (Fig. V). Three patients had superficial femoral occlusion as well. (Fig. VI). The

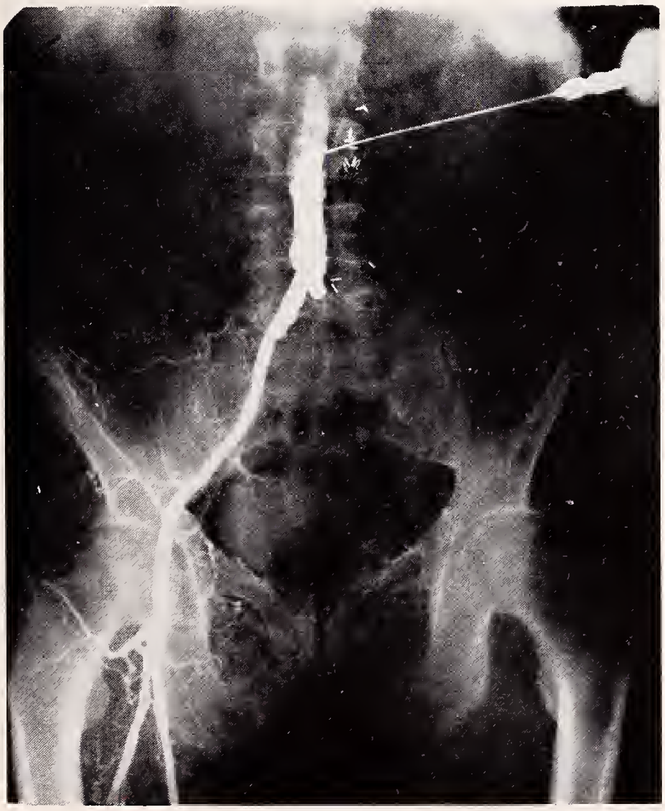

Figure V

Translumbar aortogram showing occlusion of left common iliac artery. Aorto-femoral by-pass with nylon graft done September 1957. Circulation maintained to present.

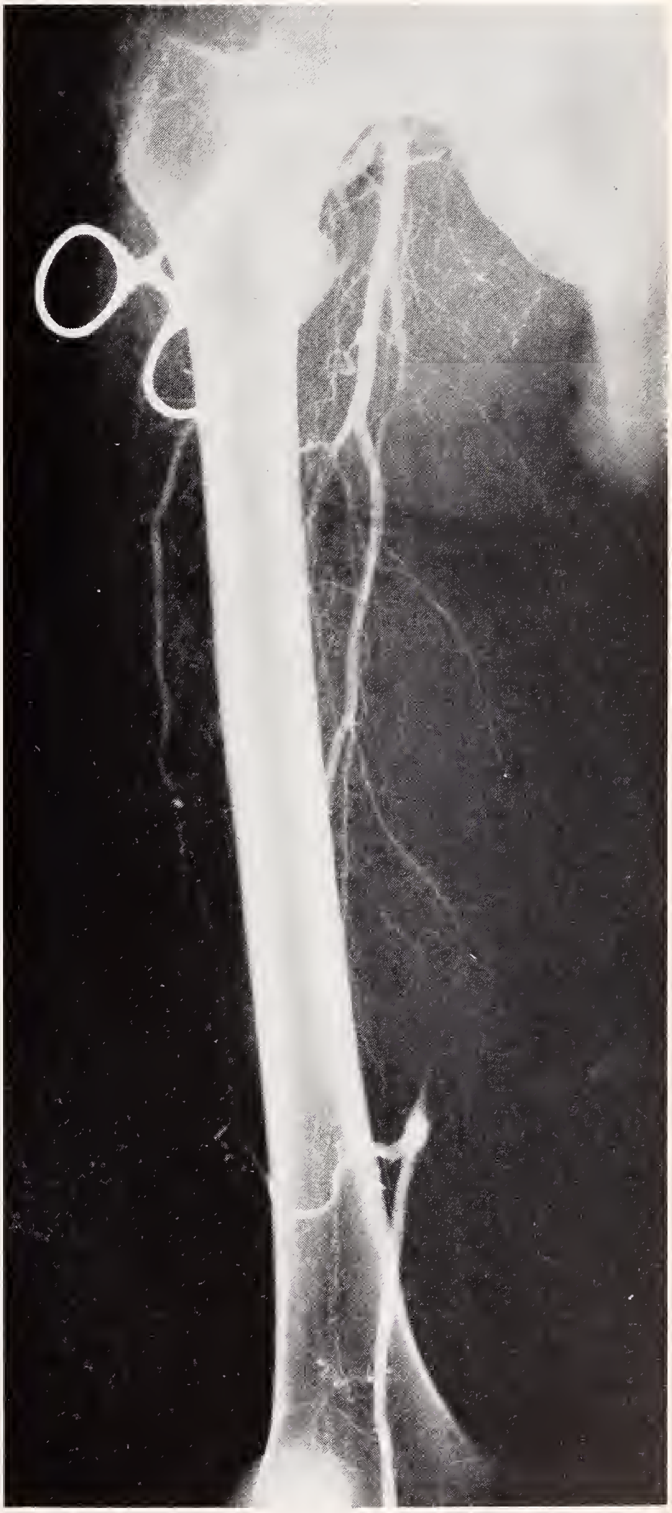

Figure VI

Right femoral arteriogram showing occlusion of upper ⅔ of superficial femoral artery. Good distal femoral artery. Good candidate for by-pass grafting. Patient also had common iliac artery occlusion. Reconstruction with aorto-popliteal by-pass graft of teflon Oct. 1959. Circulation maintained to present.

patients were all males with an average age of 59 years, the ages ranging from 44 to 66 years. Primary complaints in these patients were those of claudication in calf, thigh or hip or combination of these sites. In three patients claudication was so severe as to require rest after ten feet of ambulation. Treatment in this group of nine involved extremities was by aortoiliac thrombendartectomy in four instances. This produced normal distal circulation with normal pedal pulsations in three of the four extremities. In the fourth instance, re-thrombosis and distal propagation occured with loss of the involved limb above the knee. This patient, a 64 year old man, is the only above-knee amputee to be ambulating with a prosthesis.

There were five grafts coupled with varying degrees of local endarterectomy with restoration of normal circulation in all instances. Four grafts were from aorta or iliac vessels to lower femoral. In one instance a bifurcation graft from aorta to both popliteal arteries was performed with excellent results. In summary, elective reconstructions were performed on nine limbs in five patients utilizing four endarterectomy procedures and five grafting procedures. There were no deaths. One patient underwent above-knee amputation in the immediate post-operative period. Follow-up in this group shows one patient dead at eight months of meningitis having had normal circulation in both legs until that time. The remaining patients are normally active one to three years post-operative.

Discussion: Analysis of a mixed group of cases of arterial occlusive disease such as this cannot bring any statistical conclusions. Certain general facts can be drawn from the overall series, however.

Worthwhile salvage of limbs with arterial occlusions is possible. Arterial embolic disease should be carried to satisfactory conclusion in the vast majority of cases. By-pass grafting should be done in those cases where satisfactory flow cannot be obtained by embolectomy. Non-embolic occlusive disease should be approached with a certain hopefullness and a willingness to explore the possibilities of improvement of circulation by sympathectomy or direct arterial surgery. A reasonable percentage of these limbs may be saved, 55% in this series. In certain other patients, below-knee amputations may become a feasible procedure following circulatory improvement. The salvage of the knee joint in the patients in this series was the deciding factor in post-amputation use of prosthetic limb.

Elective improvement of peripheral circulation can be done with minimal risk. The performance of vascular surgery of this type at the community hospital level is feasible if trained and interested personnel are available.

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DIFFUSE GASTRIC POLYPOSIS

HARRY J. TAMONEY, JR., M.D. AND BERNARD B. COHEN, M.D.,* *Hartford.*

WHEN we define gastric polyposis as that condition where there are three or more adenomatous polyps present in the stomach, we encounter a rare pathological process. Menetrier[1] used the term, "polyadenomes en nappe," in his description of this phenomenon. "Polyadenomes polypeux," or simple polyps, he described as isolated, discrete papillary projections of the gastric mucosa. Review of the literature may add confusion to the above terminology as it is, at times, difficult to be sure authors have distinguished true gastric polyposis from marked hypertrophic gastritis with polyp formation. The significance is naturally intensified as the latter condition is of inflammatory nature whereas the adenomatous polyps are neoplastic.

The subject of gastric polyps has received considerable attention by numerous investigators throughout the years.[2,3,4,5,6,7,8,9] The numerous facets of information on the subject, from its high incidence in Japan[10] to its rare association with Trichobezoar,[11,12] have been discussed. Two of the largest series[13,14] reported in the literature suggest the disease is more common in men over 50 years of age.

The symptoms that usually cause patients to seek medical aid are intermittent obstruction caused by a large polyp at the pylorus or complications such as bleeding and ulceration. Achlorhydria is uniformally present. Epigastric pain not dissimilar to that associated with gastritis is usually present for a considerable number of years. Anemia is a frequent finding. Laboratory examination is usually of little assistance in establishing a diagnosis. The diagnosis in a good number of these patients is not made until laparotomy. This point will be further stressed later in this article.

Malignant degeneration of these polyps constitutes the major problem in the total understanding of the pathological process in this malady. The fluctuating views on the incidence of malignant degeneration of gastric polyps are undoubtedly related again to the terminology. It is not felt that hypertrophic gastritis is a precursor of cancer, while many agree that the adenomatous polyps may well be. The importance of this is apparent because if malignancy does not occur, no treatment may be necessary. Statistics to validate this statement can only be gathered by proper classification and separation of these two entities; i.e., the inflammatory from the neoplastic. Review of the behavior of each of these lesions may then properly be evaluated in relation to their malignant potential. Where this has been accomplished, and with repeated investigations, it is beginning to be apparent that adenomatous gastric polyps are forerunners of gastric malignancy.[2] Berg[5] has shown benign and carcinomatous changes in the same adenomatous polyps of the stomach. Edwards and Brown[16] have presented five cases of benign polyps associated with malignant degeneration. Stewart[17] found 28 per cent of the polyps observed manifested malignant transformation. Rigler and Ericksen[18] also stressed this precancerous tendency. Lawrence[19] found 18 per cent of malignancy in fifty cases. Brunn and Pearl[13] reported malignant degeneration in 51 per cent of forty-one cases. On the other hand, cases have been followed for up to twelve years without any apparent transformation. Paul and Logan[20] feel that polypoid carcinoma are malignant originally, and do not arise from benign gastric polyps. The close relationship of these two tumors cannot be denied.

While this problem may be of an extreme interest to the pathologist, roentgenologist, and gastroscopist, there is nothing academic about the clinician's approach to this problem. He must view gastric polyps with apprehension. He knows that the roentgen diagnosis of polyps is not an exact science. He is aware of the disguises, such as those in the fundal area, which will become ulcerated due to the trauma of undigested food, similating a picture of ulcerating carcinoma. That these patients should not be denied surgery is well illustrated in the case presentation in this article. The literature reports up to 50 per cent error[7,21] in both roentgenogram and gastrostomy in the diagnosis of polypoid lesions of the stomach. In essence, the clinician is upset by three questions when he undertakes the professional care of patients with the symptoms assigned to such pathology: 1) What is the lesion? 2) What is the malignant potential? and 3) How aggressive and/or conservative can the treatment be and still result in a cure? Symptoms present are common in the three diagnostic possibilities: 1) Gastric cancer, 2) Hypertrophic gastritis, and 3) Polyposis. In

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summary, even with the help of gastroscopy, X-ray, physical findings, and laboratory data, the answer to the true nature of the problem still rests with laparotomy. When gastric polyps are found, the question as to proper treatment being resection is being rapidly resolved with the more and more reports substantiating its malignant potential. The case annotated in this report further illustrates the diagnostic difficulties and how consideration of operability can be a primary problem.

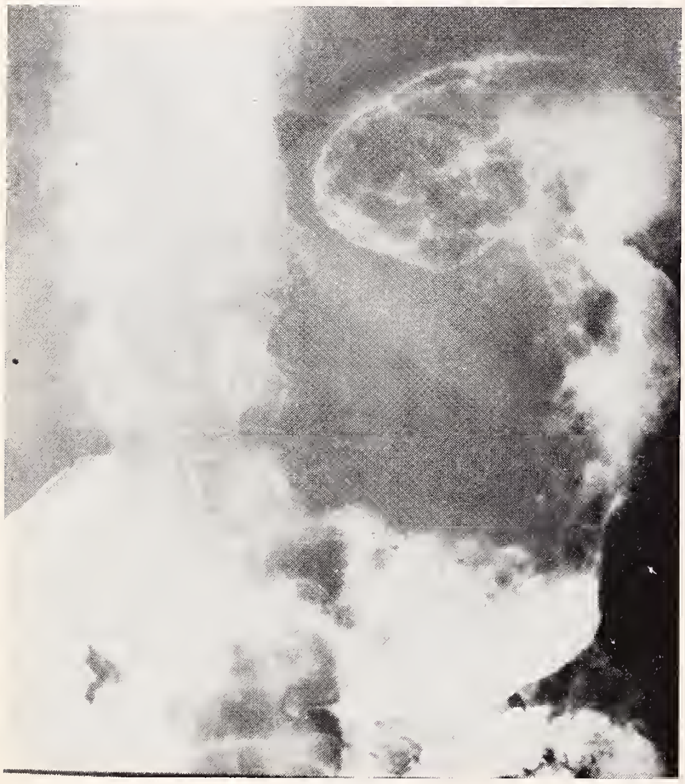

Figure I

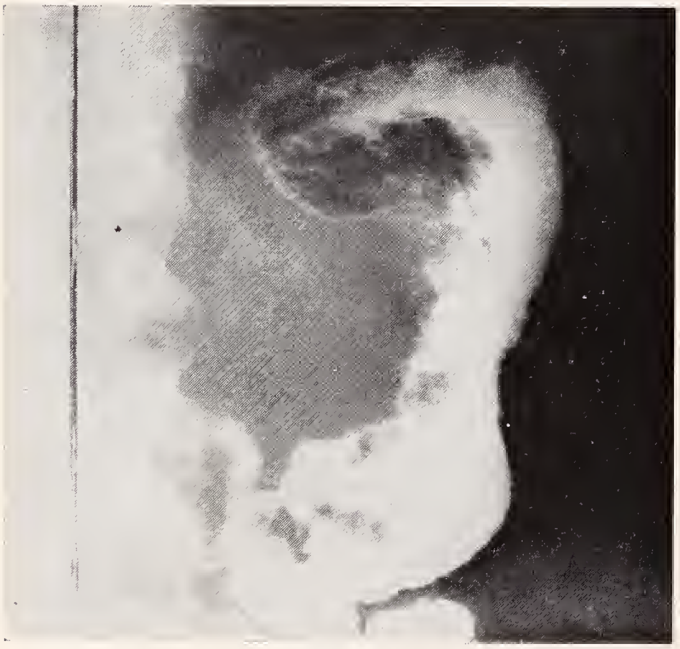

Figure IA

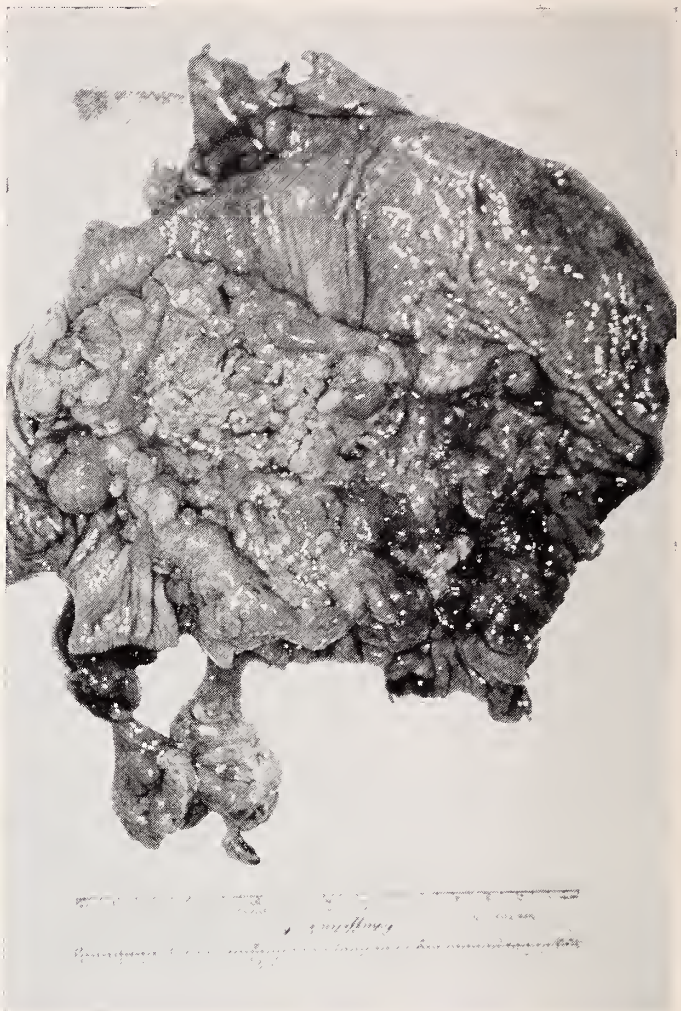

Figure II

CASE REPORT

J. S., a 71-year-old negro, was admitted to the John McCook Memorial Hospital on October 21, 1959, with the chief complaint of painful swallowing for two months. He had had a burning sensation in his midsternal region and intermittent gastric pain for many years. This intermittent interprandial discomfort had increased in the past six months and was no longer relieved by food as it was initially. He denied any vomiting of blood or tarry stools but he had lost thirty pounds in the past year. His past history did not contribute to his chief complaint and was noninformative other than that he was a diabetic taking 40 units of N.P.H. Insulin every day.

Physical examination on admission revealed a thin Negro with obvious weight loss. Positive findings were limited to the abdomen, where an 8 cm. mass was palpable in the epigastrium. This was freely movable, apparently separate from the left lobe of the liver, nontender, and it pulsated.

Laboratory studies revealed blood in the stools. Hematocrit was 33 per cent with a hemoglobin of 9.2 gms. Chest X-ray, I.V.P., E.K.G., and other

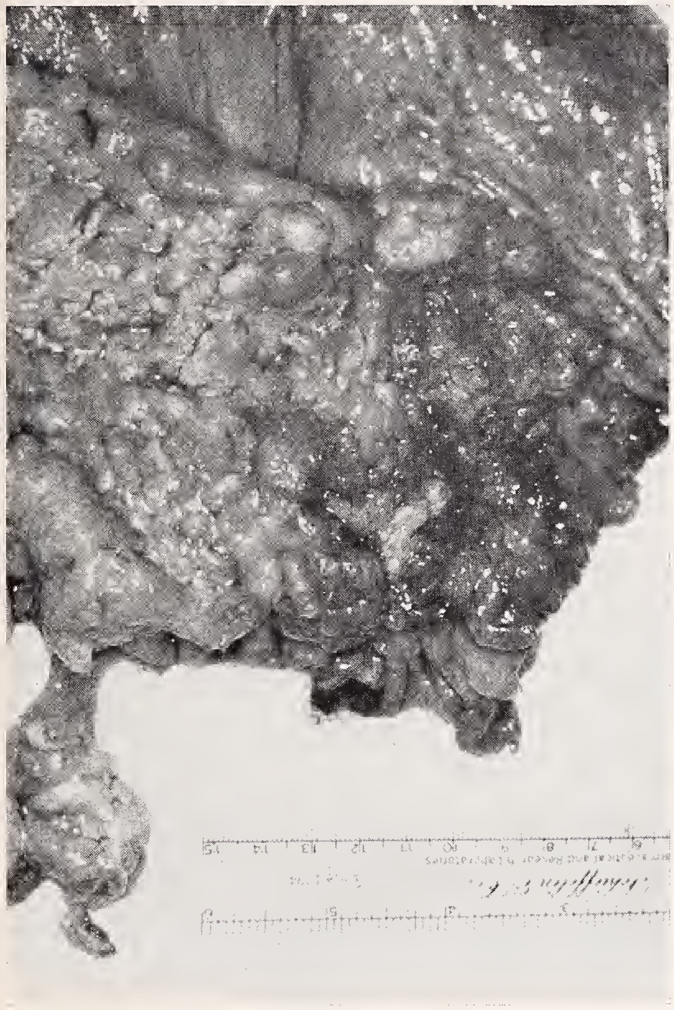

Figure IIA

studies all fell within normal limits, except his G.I. series. Fig. I, IA. These films were interpreted as a huge fungating carcinoma of the stomach.

Exhaustive search failed to reveal any metastatic disease, and nothing was found to conclusively prove that the lesion was locally nonresectable. The patient's blood volume was restored and exploratory laparotomy planned. At surgery the stomach was almost completely filled with a polypoid mass. Further gross evaluation revealed this to be multiple polyps with a rim of normal fundal stomach. No evidence of metastatic disease in the liver or regional nodes was identified. A subtotal gastrectomy was then carried out. Fig. II, IIA. The Patient's postoperative course was uncomplicated, and he was discharged feeling better than he had in a "long, long time."

Gross inspection of the specimen revealed a massive polypoid tumor, measuring 17 x 18 cm. and averaging 2 cm. in thickness.

Histological identification of a well-differentiated, adenocarcinoma, Grade I, arising from pre-existing polyposis was made (Figures III, IIIA). Many normal appearing nodes present in the adjacent adipose tissue failed to show any metastatic involvement.

COMMENT:

In view of the roentgenographic findings, it was suggested that this patient had far advanced carcinoma. This justified the diligent attempt to find remote metastatic disease which could have precluded surgery. Actually, laparotomy revealed clear evidence that despite the logical roentgenographic interpretation, there were no findings of cancer beyond the local lesion. Thus, exploration justified a surgical judgment, and resectable disease was the satisfactory accomplishment. Here laparotomy proved to be the best tool of diagnosis even in face of the preoperative impression of an extensive gastric carcinoma.

SUMMARY:

1. A brief review of gastric polyposis has been presented with emphasis placed on the malignant potential of the lesion.

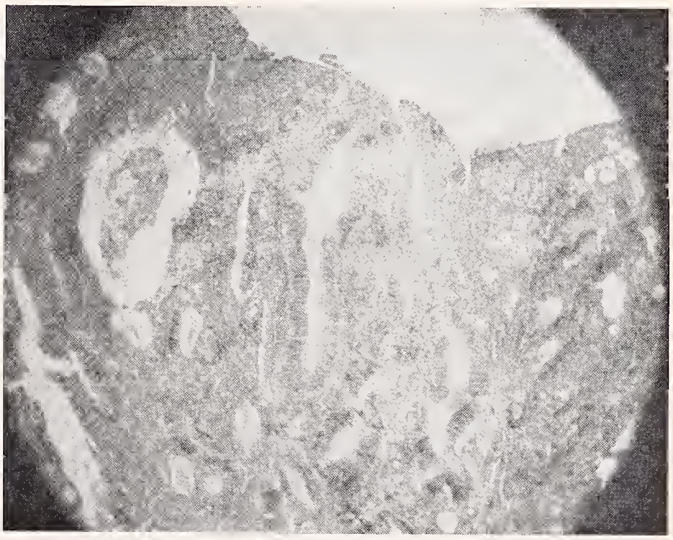

Figure III

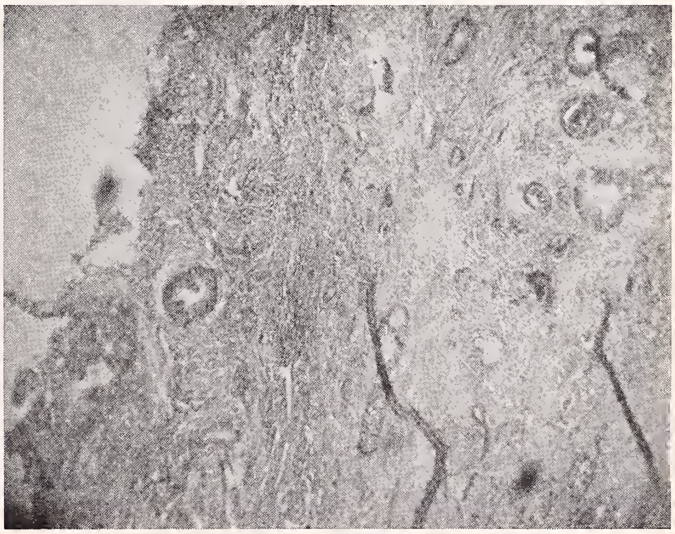

Figure IIIA

2. Laparotomy and biopsy have been championed as the only satisfactory approach to the problem.

3. A case of malignant degeneration of gastric polyposis has been presented.

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Editorials

The Cradle Of Treponema Pallidum

The long protracted controversy concerning the original source of syphilis has abated in our days. The now prevailing opinion, though short of general consensus, would place the erstwhile native habitat of the pale spirochete in the western hemisphere, waiting till 1492 for innocent Europeans to "come and get it."

This armistice among medical historians notwithstanding, a belated observation[1] may still be added to the record: In the seventh canto of Dante's Purgatory[2] the poet vents his spleen against Philip the Fair in a contemptuous reference to his French malady and its lancinating torments of a life loathsome with vice. These words cannot be ignored since Dante was a regular doctor enrolled in the guild of physicians and apothecaries at the age of thirty and elevated to the rank of one of the priori in the year 1300, nearly 200 years ahead of Columbus' voyage.

In the light of Doctor Dante Alighieri's remarks about "mal di Francia," one could not with calm conscience give the Indians priority for bestowing upon the good old world the luetic blemishes of contaminated bliss.

From still another quarter comes a note of pertinent interest: In Merejkowski's classic[3] entitled "Romance of Leonardo da Vinci," Beatrice, the wife of Ludovico (Moro) Sforza, duke of Milano, writes in 1496 to her sister Isabella, wife of count Gonzaga in Mantua. In that letter Beatrice includes for her brother-in-law a recipe against the French sickness consisting of mercury anointments according to the Milanese court physician, Luigi Marliani.

All that, only four years after the first possible white sailor's surrender of his chastity to the bewitching charms of an Indian maiden, and thirty-four years before Girolamo Fracastoro's publication of his renowned medical poem at Verona, entitled "Syphilidis, sive Morbi Gallici Libri Tres."

In all fairness, no one should still wish to "give it back to the Indians."

MARCUS BACKER, M.D.

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The Conquest Of Polio

One of the truly great medical advances of this generation has been the development of proved methods of reducing the incidence of poliomyelitis, the once great crippler.

Salk vaccine has been generally available since 1956. But, ironically, 38 per cent of our nation's children 5 years old and younger, 63 per cent of men 20 to 40 and 48 per cent of women 20 to 40 have not taken full advantage of the Salk vaccine.

As a result of the Salk vaccine, paralytic polio in the United States declined from 6289 cases in 1959 to 2265 in 1960. In 1952 there were more than 21,000 cases of paralytic polio reported.

A study of the 2265 cases in 1960 indicates that almost half were babies and children 5 years of age and younger. Students show also that the young adults who contracted the disease last year were among the most severely paralyzed.

In the last two years, considerable material has appeared in the press concerning the relative values of the killed vaccine, developed by Dr. Jonas Salk of the University of Pittsburgh, and the oral, live vaccines developed by Dr. Hilary Koprowski of the Wistar Institute in Philadelphia, Dr. Herald Cox of the Lederle Laboratories and Dr. Albert Sabin of the University of Cincinnati.

Writing in a recent issue of the Journal of the American Medical Association, Dr. Leroy E. Burney, former Surgeon General of the United States Public Health Service, said:

"It is now evident that an oral, live, attenuated vaccine will take its place along with Salk vaccine as an additional weapon for the control of polio."

A number of large-scale studies have been undertaken in the last two years to evaluate the effectiveness of the various types of oral, live, attenuated vaccine. The first reports are not yet available. Reports to date, however, of studies undertaken in a number of foreign countries as well as in the United States indicate these vaccines are safe and effective.

There is no doubt that the Salk vaccine is effective and reduces the risk by about 90 per cent. Before the Salk vaccine became available in quantity, there were 20,000 to 60,000 cases of polio each year. The annual number of cases since 1956 has been well under 10,000. In a booklet, "The Costly Time Lag," released recently, the Public Health Service says:

"The typical polio cripple of the post-vaccine period is a child less than 5 years of age in an underprivileged family. It is unlikely that the family will ever be able to pay for the child's medical care and rehabilitation or that the child will be able to support himself when he grows up. Therefore these polio cripples will cost thousands of tax and charity dollars in the years ahead."

This is true also for young breadwinners.

Welfare and health departments can follow the lead of Allegheny County, Pennsylvania, in concentrating their efforts on families receiving public assistance. Mobile and community clinics sponsored by health departments or fraternal groups can be held in low-income districts.

Before vaccine was developed, the polio threat hung over the head of every man, woman and child. Then, we were helpless. Today, we are careless. Added to the tragic suffering and cost of every case of polio in 1961 will be the additional burden of guilt for not having been vaccinated.

**By Howard A. Rusk, M.D., reprinted with permission of the author and of The New York Times.*

The Diagnostic Value Of Sputum Cytology

George Papanicolaou, M.D., has achieved a well merited reputation for his studies on the cytology of uterine discharge and the bearing on diagnosis. Recently he has called attention to the fact that studies of a similar nature, involving ciliated cells from bronchial epithelium which can be found in specimens of sputum, also present diagnostic possibilities.*

He points out that in 1948 his attention had been called to the presence in smears from sputum of "small ciliated tufts which appeared to be broken-off anucleated tips" of these ciliated cells.

His more recent studies, illustrated by an excellent colored plate, record a much more extensive and intensive survey of sputum cytology. He notes that the nucleated basal fragments of the degenerated cells can be recognized in smears and that they may show a variety of changes: a resemblance to undifferentiated reserve cells, concentration of their chromatin into dense clumps, necrosis, and a phagocytosis of the degenerated cells by polynuclears and histiocytes.

Many of the degenerated cells show also round acidophylic inclusions of various sizes, the nature and significance of which is not clear. The degenerative changes described may be indicative of pulmonary infections usually characterized by cough, purulent or even bloody sputum, dyspnea, chest pain, wheezing, rales and fever. It is particularly to be noted that cancer of the lung was associated with characteristic changes, shown on the illustration and involving 12 per cent of the patients included in a preliminary tabulation of 150 cases. While the author does not regard his findings as final, these results indicate the possibility of a new and valuable technique of diagnostic value in patients with pulmonary pathology.

G.B.

*G. N. Papanicolaou, N.Y., State Jour. Med., 1956, Vol. 56, p. 2647.

New, Killed Poliovirus Vaccine 98 Per Cent Effective

A new, purified and concentrated killed poliovirus vaccine has proved 98 per cent effective in a group of 53 children, mostly infants, it was reported today in the recent Journal of the American Medical Association.

The study indicates that the new vaccine (Purivax) can provide satisfactory immunity against all three poliovirus types in over 90 per cent of persons with two injections given one month apart, the report said.

The Salk vaccine given to a control group of 41 children of comparable age produced immunity in 76 per cent.

The study was reported by Drs. Carl Weihl, Cincinnati; David Cornfeld, Philadelphia; Harris D. Riley, Oklahoma City; Nancy Huang, Philadelphia, and Henry Cramblett, Winston-Salem, N.C.

The new vaccine appears to fill the important public health need for an agent which will consistently, rapidly, and safely immunize nearly all recipients against all three poliovirus types, the authors said.

Although the presently available Salk polio vaccine has a high level of effectiveness, they said, the problem of controlling polio is "unfinished business." There still remains much room, not only for improving the utilization of the vaccine, but also for improving the efficacy of the vaccine itself, moving toward an ideal of 100 per cent efficacy, they said.

THE PRESIDENT'S PAGE

The world today is engaged in a gigantic and often times bitter struggle between two totally divergent philosophies—on the one hand, the philosophy of totalitarianism, which denies the importance of the individual and emphasizes the all embracing power of the State — on the other hand the philosophy of freedom which insists upon the importance of the individual and places the State in its proper position as servant of the individual. We have become accustomed to refer to this conflict as The Cold War. How many of our physicians are aware that there is concurrently a Medical Cold War in progress—the same issues are at stake—individual freedom of choice of hospital and physician versus state directed control of hospitals and physicians.

If the medical profession of this State is aware of The Medical Cold War, the record would indicate that Connecticut Physicians are not showing much concern. Let me document this bold assertion with a few facts.

During the 169th Annual Meeting of the Connecticut State Medical Society the Program Committee arranged for Thomas B. Curtis, an out-standing speaker, a graduate of one of our leading Eastern Ivy League Colleges, an eminent Congressman, an important member of the House Ways and Means Committee, and a dedicated foe of Statism, to speak on the topic of "The Medical Cold War." The Congressman left Washington by plane in the dawn breaking light at 6:30 a.m. so that he might be on time to make his presentation at 10 a.m. in Hamden, Connecticut. Every member of our Society was informed of this presentation when the Program of the Annual Meeting of the Society was sent to each member ten days prior to the meeting. In addition, on Tuesday, April 25th, at the Meeting of The House of Delegates, the officers and delegates, numbering over 100 were individually requested to inform their constituents of the importance of Congressman Curtis' presentation. Again, during the official opening ceremonies of the Convention on the morning of Wednesday, April 26th, the attention of those present was again directed to this important talk and finally at the Annual Dinner of the Society, those doctors and their wives in attendance were urged to pass the word among their colleagues, directing the same colleagues' attention to the importance of the Congressman's talk. It is indeed with some disappointment that I must report that less than 100 physicians were on hand at 10 a.m. on Thursday, April 27th, when Congressman Curtis gave his stimulating and factual presentation on "The Medical Cold War." An interesting observation is that the physicians present numbered less than the total count of those officers and delegates who in accepting their offices have given their fellow physicians the promise of adequate representation. Let me assure you, as individual members of the Society, if it is your intention to "Let George do it," I hasten to assure you that George is not doing it.

Over a cup of coffee, the Congressman was asked by one of the physicians sitting with him, if the meager audience he addressed at the auditorium in Hamden High School, troubled him. Mr. Curtis answered no, but added in explanation that he expected those present would bring his message to those not in attendance. It is my hope, by directing your attention to Mr. Curtis' talk which appears in *Connecticut Medicine* on page 363 of this issue, that we may in some way accomplish the hope of the Congressman.

And further, let me ask, who is fighting the Medical Cold War in Connecticut? The doctors of Connecticut?

Thomas M. Feeney, M.D.

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*

160 St. Ronan Street, New Haven, Conn.
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James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

HOUSE OF DELEGATES ANNUAL MEETING

April 25, 1961

The annual meeting of the House of Delegates was held on the first day of the 169th Annual Meeting of the Connecticut State Medical Society, April 25-27, 1961 at the Hamden High School Hamden, Connecticut. The following items of business were considered and acted upon:

I. REPORTS OF OFFICERS AND COMMITTEES.

The reports of several officers were accepted and will be published in Connecticut Medicine; also the report of the General Manager and the reports of the various committees. On one committee report, that of the Committee on Medical Economics and Insurance, the House voted: That the entire report of the Committee on Medical Economics and Insurance be deleted from the record of the proceedings of the House of Delegates, April 25, 1961.

II. ELECTION OF OFFICERS AND COMMITTEES, 1961--62.

1) *Officers*:

The following slate was elected:

President, Thomas M. Feeney, Hartford (elected 1960)
President-elect, Clyde L. Deming, New Haven
1st Vice-president, John D. Booth, Danbury
2nd Vice-president, Walter Weissenborn, Hartford
Treasurer, Isadore S. Goldberg, Torrington
Secretary, Orvan W. Hess, New Haven
Managing Editor of the Journal, Denis S. O'Connor, New Haven
Literary Editor of the Journal, Louis H. Nahum, New Haven
AMA Delegate (Jan. 1, 1962 to Dec. 31, 1963), Norman H. Gardner, East Hampton
Alternate AMA Delegate (Jan. 1, 1962 to Dec. 31, 1963), Vincent A. Gorman, Bridgeport
Councilor-at-Large, Ralph T. Ogden, Hartford
Speaker of the House of Delegates, Michael R. Scully, Bridgeport
Vice-Speaker of the House of Delegates, Clifford E. Wilson, Norwich

2) *Committees*:

Committees elected by the House of Delegates and by the Council for 1961-62 will be published in later issues of Connecticut Medicine.

III. OLD BUSINESS

The House of Delegates accepted a report of the Committee Appointed to Implement the Resolution on Hospital Accreditation, adopted at the semi-annual meeting of the House on December 6, 1960. The report was presented by James R. Cullen, Chairman, and will be published in Connecticut Medicine.

IV. NEW BUSINESS

Recommendations of the Council.

1) Revision of the Bylaws. After hearing and discussing several motions relative to adopting a new set of bylaws, recommended by the Council, the House voted to table action on this matter until the semi-annual meeting to be held in the Fall of 1961. Following this action, the Chairman of the Council urged all constituent county associations, members of the House and others to transmit their suggestions and recommendations regarding the proposed revision of the bylaws to the Council, so that they may be referred to the Subcommittee to Review and Revise the Bylaws for study and subsequent report.

2) Rescinding of Action taken by the House of Delegates on January 27, 1960. Upon recommendation of the Council, the House voted to rescind Resolution No. 5, adopted by the House on January 27, 1960 at a Special Meeting. This was the Resolution which stated, in part, that "in the considered opinion of the House of Delegates, all of the Society's members who serve on the Board of Directors of CMS, Inc., or on the CMS Medical Advisory Committee, shall be morally obligated to observe and further the intent of (the other Resolutions adopted on Jan. 27, 1960) in any and all deliberations of CMS, Inc. in which they may participate."

V. UNFINISHED BUSINESS

There were no recommendations contained in the reports of officers. The report and recommendations of the Committee on Medical Economics and Insurance was referred to Reference Committee and acted upon as described under I. Reports of Officers and Committees.

COUNCIL MEETING

Thursday, May 4, 1961

This being the organizational meeting of the Council for 1961-62, it was called to order at 2:40 P.M. by Thomas M. Feeney, Hartford, President of the Society, who acted as Chairman pro tem.

Following some personal remarks and observations, and introducing the new officers and County Councilors, Dr. Feeney declared the floor open for nominations for Chairman of the Council, 1961-62. The names of Thomas M. Feeney, Hartford, and Ralph L. Gilman, Storrs, were placed in nomination. Dr. Feeney declined to be nominated and it was then VOTED that the nominations be closed and that Dr. Gilman be elected to office unanimously.

The new Chairman called the business meeting to order at 3:00 P.M. Present in addition to the Chairman were: Drs. Feeney, Deming, Goldberg, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Wilson, Ogden, Bradley, Cornwell, Rentsch, Murray, Jr., Purnell, Gorman, Martin, Gevalt, Egan, Davis, Phillips, Chartier. Also present: Dr. Richards, Mrs. Lindquist, Mr. Burch. Absent were: Drs. Katzin, Grant, and Hastings.

It was VOTED to approve the printed minutes of the meeting of April 12, 1961.

COMMITTEE ON REHABILITATION. It was VOTED to request John C. Allen, Chairman of the Committee to recommend a replacement for Wilson F. Smith, Hartford, who cannot serve.

DENIAL OF HOSPITAL PRIVILEGES. On a request from a member of the Society that the reasons for denial to him of staff privileges in a general hospital of the State be investigated, it was VOTED to refer the matter to the Committee on Hospitals for investigation and report back to the Council the pertinent facts in the case. The observation was made that this situation did not fall clearly into the purview of the Special Panel to assist in resolving physician-hospital disagreements, because the member had never held a staff appointment at the hospital concerned.

CONNECTICUT MEDICAL SERVICE, INC. The following communication was presented to the Council as information:

April 21, 1961

"Dear Dr. Gilman:

Mr. Coolidge will be away for several days but I informed him of your recent letter by telephone, and he asked me to reply for him."

"Work is being completed on the formal document of the Community Contract and we expect to request its approval by the Insurance Commissioner early next week. Mr. Coolidge said that he will get in touch with you when he returns to discuss a joint meeting of the Liaison Committees as you have suggested in your letter of April 17.

Sincerely yours,

W. H. Horton, M.D."

Dr. Feeney and others discussed certain problems relating to payment for in-hospital medical care of a psychiatric nature under the CMS Community Contract. From an actuarial standpoint, it appears that protracted coverage of psychiatric services under this feature might prove prohibitive in cost and call for upward revision of the premium charges. No decision was reached in this matter, it being assumed that it would be brought to the attention of the Liaison Committee, if unresolved by the CMS Board of Directors and Medical Advisory Committee.

SUBCOMMITTEES OF THE COUNCIL. The subcommittees of the Council were reviewed and revised for 1961-62 as follows:

Subcommittee to Study and Revise the Bylaws: William J. Murray, Jr., New London, Chairman; Jachin B. Davis, New Haven, Gerard M. Chartier, Danielson, Samuel B. Rentsch, Derby, Michael R. Scully, Bridgeport, Phillip M. Cornwell, Hartford.

CMS-CSMS Liaison Subcommittee: Ralph L. Gilman, Storrs, Chairman; E. Tremain Bradley, South Norwalk, Max Caplan, Meriden, Clyde L. Deming, New Haven, Thomas M. Feeney, Hartford, Orvan W. Hess, New Haven, Nicholas T. Phillips, Norwich, William R. Richards, New Haven, ex-officio.

Subcommittee on Loan Fund: Isadore S. Goldberg, Torrington, Chairman; Richard F. Grant, Cromwell, Michael R. Scully, Bridgeport. (Unchanged from 1960-61)

Subcommittee on Opinion Survey: Norman H. Gardner, East Hampton, Chairman; Philip M. Cornwell, Hartford, Vincent A. Gorman, Bridgeport, Benjamin Katzin, Torrington, Denis S. O'Connor. (Unchanged from 1960-61)

In connection with the appointment of the Subcommittee to Study and Revise the Bylaws, Dr. Gilman recommended that the committee seek suggestions and recommendations from the constituent county medical associations with a view to having ready for presentation at the next meeting of the House of Delegates a complete revision of the existing bylaws.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to approve the recommendation of the Public Health Committee that "publicity" be given to the continuing need for Salk polio vaccine immunizations. It was further VOTED to recommend that all county medical associations also publicize locally the need for polio immunizations, and that all "publicity" in this regard should be undertaken with the advice of the Society's Committee on Public Relations. The General Manager was instructed to obtain from Dr. Osborn recommendations for such publicity, and to make these recommendations available to the PR Committee in time for its meeting on May 11th, if possible.

PROGRESS REPORT ON KERR-MILLS BILL IMPLEMENTATION. Dr. Feeney presented a detailed report on the progress being made in the General Assembly toward implementing the Kerr-Mills law in Connecticut. In brief, he believes that the Joint Committee on Public Welfare and Humane Institutions will probably report out a bill which will embody parts of the proposal of the Welfare Commissioner and, it is hoped, some of the provisions which the Society and allied health agencies support. The picture is neither clear nor definitive at this time.

OPERATION JAYCEE DOCTOR. The Council was informed that Commissioner Frassinelli of the State Department of Consumer Protection has ruled that this program is illegal. It was VOTED to notify the Jaycee state headquarters that in deference to Commissioner Frassinelli's ruling, the CSMS suspends its approval of Operation Jaycee Doctor temporarily. The President of the State Woman's Auxiliary is to be notified of this action of the Council.

RESIGNATION OF REPRESENTATIVE TO STATE DEPARTMENT OF HEALTH'S OPERATIONAL SURVIVAL PLAN. It was VOTED to accept the resignation of Reginald C. Edson, Hartford, as a Society representative to the Health Department's Operational Survival Plan. It was further VOTED to defer action in replacing Dr. Edson as a representative until the General Manager's office has obtained information as to the functions of the Survival Plan and the scope of activity of the Society's representatives to it.

COMMUNICATION RE BYLAWS FROM HARTFORD COUNTY MEDICAL ASSOCIATION. In a letter dated April 28, 1961, the Executive Secretary of the Hartford Association raised certain questions relating to separate or contingent membership in the county and state organizations, and also to making the retirement age from active membership uniform between constituent associations, the State Medical Society and the AMA. It was VOTED to refer these matters to the Subcommittee to Study and Revise the Bylaws.

APPOINTMENT OF STEERING COMMITTEE. In response to a letter from Denis S. O'Connor, New Haven, in which concern was expressed regarding the lack of participation of Society members in the business of organized medicine, the inadequacy of communications from the state level to the "grass roots" level, and other related matters, it was VOTED to direct the Chairman of the Council to appoint a Committee of past presidents and other informed members to develop suggestions as to how the state medical organization can be made more effective in all its operations and to report its findings in these matters to the Council.

GENERAL PRACTITIONER OF THE YEAR—1961. At the request of the AMA for nominations from the Society for the AMA award of "General Practitioner of the Year", it was VOTED to request the Connecticut Chapter of the AAGP and the eight constituent county medical associations to submit the names of several qualified general practitioners in this State from among whom the Council may select a nominee to forward to AMA before November, 1, 1961, as the CSMS candidate.

WNHC RADIO DEBATE "CONTROVERSY". The Council was informed that John N. Gallivan, Hartford, had expressed a desire to be relieved of the assignment as a participant in a debate on "Socialized Medicine" on this WNHC program. It was VOTED to appoint Jachin B. Davis, New Haven, to replace Dr. Gallivan in this assignment.

MEDICARE PLAN CONTRACT, 1961-62. The Council was notified that the Medicare Plan Contract for the coming year is not changed from the one in existence during 1960-61, and that the Committee on Medicare Plan recommends its approval by the Council. The effective date of the new Medicare contract is to be June 1, 1961. It was VOTED to refer the contract to the Committee on Third Party Payments for study and recommendations forthwith, and if approved by that Committee, be given Council approval as of June 1, 1961.

ADVISORY COMMITTEE ON REGULATION OF LABORATORIES. In anticipation of the General Assembly's passing SB 674 which would authorize the State Department of Health to regulate the operation of private clinical laboratories, the Council was requested by Commissioner Foote to appoint a "consumer" representative to serve on an Advisory Committee which will assist the Commissioner. Other representatives are being requested from the Connecticut Society of Pathologists and the Connecticut Association of Clinical Laboratories. It was VOTED to appoint Benjamin V. White, Hartford, to serve with this Committee, when formed.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to appoint Allan C. Mermann, Guilford, to membership on this Committee to replace Joseph L. Hetzel, Waterbury, resigned.

ANNUAL MEETING SPEAKER'S EXPENSES. It was VOTED to reimburse Rep. Thomas B. Curtis, Missouri, in the amount of $100.00 for his expenses in addition to his travel cost incurred in attending the Annual Meeting as a speaker on the regularly scheduled program, Thursday, April 27, 1961.

REGIONAL ADVISORY COMMITTEE ON MOTION PICTURES, RADIO AND TV. It was VOTED to appoint Milton M. Lieberthal, Bridgeport, Orvan W. Hess, New Haven, and Stevens J. Martin, Hartford, as the Society's three representatives to the East Coast Advisory Committee on Motion Pictures, Radio and Television of the American Medical Association. The request for these appointments came from the Medical Society of the State of New York.

ADVISORY BOARD TO THE CONNECTICUT LICENSED PRACTICAL NURSES ASSOCIATION. It was VOTED to request the Councilors from the Fairfield, New Haven and Hartford County Medical Associations to each submit to the General Manager's office the name of one member of his association as a candidate for service with this Advisory Board of the Connecticut LPN Association, the three names to be forwarded to the Executive Secretary of that Association for consideration.

ANNUAL MEETING OF THE CSMS—1961. It was VOTED to request the Program Committee to confer with the General Manager to review the results of the last Annual Meeting and to discuss planning for future meetings with the idea of developing programs, etc. to increase the attendance

It was VOTED that the reports of the General Manager and the Past President, John N. Gallivan, presented at the House of Delegates meeting on April 25, be reprinted for distribution. These reports will appear in the June issue of Connecticut Medicine and it was recommended that Dr. Denis S. O'Connor and Mr. James Burch determine other distribution.

DATE OF NEXT MEETING. It was VOTED that the Chairman shall determine the date for the next meeting of the Council.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following:

Donald R. Weisman, M.D., Age 37—M.D. New York Medical College 1952. Specialty Otolaryngology.

James Tsomides, M.D., Age 36—M.D. George Washington University 1953. Specialty Surgery.

Joseph N. Ward, M.D., Age 34—M.D. University College Dublin 1952. Specialty Urology.

PLACEMENT OPPORTUNITIES

General Practitioner in New Hartford—Litchfield County.

A desirable location for a General Practitioner or Pediatrician in West Haven—New Haven County.

Pediatrician and Obstetrician wanted in Fairfield County.

Immediate openings available for full time House Staff Physicians to serve in 200 bed Municipal Hospital. Salary $10,348 to $11,596 plus fringe benefits. Minimum tenure one year. Requirement: Connecticut license. Contact Myron E. Freedman, M.D., Director of Medical Education, J. J. McCook Memorial Hospital, Hartford, Connecticut.

HOUSE PHYSICIAN: Small progressive Hospital; Connecticut License required; Full maintenance—Salary open.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STSREET, NEW HAVEN.

1961 MEETINGS

June 14 — Medical-Dental Institute for the Rehabilitation of the Chronically Ill and the Aging, Masonic Hospital and Home for the Aged, 2:00-5:00 P. M. Dinner meeting: 6:30 P. M.

June 26-30 — Annual Meeting, American Medical Association, New York City.

October 19 — Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30 — Clinical Meeting, American Medical Association, Denver.

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THE MEDICAL COLD WAR

What Is Our IQ On The Medical Care Controversy?

HON. THOMAS B. CURTIS, *St. Louis, Missouri*

An address delivered at the Annual Meeting of the Connecticut State Medical Society, April 27, 1961, Hamden, Connecticut. Congressman Curtis is Senior Republican House Member, Joint Economic Committee and member of the House Ways and Means Committee.

EDITOR'S NOTE: *On April 27, 1961, a priviledged few of the Society's 3,300 members — perhaps one-tenth of one per cent heard the following message of inspiration from a public servant of the highest calibre. Representative Curtis brought to the physicians of Connecticut a point of view on "medical care for the aged" which is unique in its forthrightness, unusual in its clarity of thought and challenging in its call to keep America free. It is well worth reading and should serve as a five-alarm warning to those who are still basking in a dream world of false security.*

THERE is much misinformation, misunderstanding, propaganda and outright falsehoods abroad concerning the real facts regarding medical care legislation pending before this Congress. News stories, radio and TV programs, and, even many officials are guilty of speaking from the hip without having examined into the facts. The proponents of government compulsory health insurance pretend to be experts, which they are not, in all fields in which they urge a government take-over of both industry and the professions. They are hard at work disguising the true facts by parading before the public's eye drawings, pictures and cartoons of people in distress while claiming that the solution to all of these ills, aches and pains can be supplied through "free" government—supplied food, housing, unemployment checks and medical services. Doesn't it seem strange that the only two committees of this Congress charged with the responsibility of considering health care legislation, after examining the facts, hearing testimony and meeting in extended executive sessions have voted down by a ratio of at least two to one the compulsory government programs presented them. Let me provide you with some of the pertinent information upon which these decisions have been made. A majority of the members of both the House Ways and Means Committee and Senate Finance Committee are agreed that with all of the voluntary, local state and federal medical programs available to our population, including the recently enacted legislation now popularly known as the Mills-Kerr bill, every person in the United States is possessed of either the ways or the means for securing proper medical care. Admittedly, for a small percentage of our population there is now and has been in the past difficulty in meeting the cost of prolonged and expensive illnesses. The appropriate reference committees of Congress which have considered this problem over the past several years have, in their reports to you, indicated that more than 70 per cent of the total population and over 50 per cent of the aged possess health insurance. Moreover, the quality of insurance protection is and has been improving rapidly. One example of the improvement in this field is the recent action by your State's legislature, the Connecticut General Assembly. It has given approval to a plan by which Connecticut insurance companies can join together in providing health insurance for the aged. This is a truly significant step forward. We know that cancellation of health insurance because of age has been nearly eliminated. Some of this improvement possibly has come in the bright light generated by congressional hearings.

We know that the quality of medical care in the United States under our system is the best in the world whether the individual purchases health care voluntarily or receives it from one of the levels of government without having any agency impose a compulsory health tax upon him—We know that this kind of a system guarantees a higher quality of medical care than is being delivered to the population in all other parts of the world under compulsory systems—compulsory in the tax sense, and compulsory in the sense that the tax is paid whether the individual uses the system or not, and compulsory in the sense that the providers of care report to government authority and deliver the kind of care which is prescribed by government rather than by the doctor. We know that in no nation other than our own does any similar population group live longer and have less incidence of disease than do Americans. We know that in every civilized nation in the world except in the United States there exists a system of government or socialized medicine. It is no accident that by comparison we excell all these systems in the quality of medical care which is available to our population. We know that 30 years ago our medical students—in fact, medical students from all sections of the world — flocked to the medical centers of Europe for their education. This was before the day that governmental medicine systems came to these former great medical centers. Today medical students the world over, including western Europe, travel not to Europe, but, rather, to the United States. In every nation in the world except our own, the ratio of doctors to population is on the decline, with all of the adverse implications that such a decline has upon all the population. The ratio of physicians per patient in the United States is remaining steady at about one physician to 750 of population despite our population explosion. Reports from abroad indicate that fewer sons of physicians in foreign countries are following their father's footsteps in the medical pofession. Because few young men are attracted to the medical profession in Great Britain and because many are coming to the United States, the ratio of physicians to population which was 1 to 877 in 1947 decreased to 1 to 1149 by 1957, indicates loss in quality.

Even in Canada, which has a compulsory tax-supported system which involves only hospitalization, there is a loss of physicians to the United States in excess of 200 per year.

If we need further proof of the great number of foreign trained physicians who have recently come to America, make a trip to a hospital and there talk to some of the 12,000 and more foreign graduated physicians who are interning and serving residencies in our hospitals. It makes a trip to the hospital have the enchantment of a visit to 100 foreign countries. And a goodly majority of these foreign trained doctors, you will learn, have applied for United States citizenship.

On the technique side of medicine, difficult and advanced treatment and surgery has become so highly developed in the United States that daily one reads in the newspaper of collections being made to rush some person to the United States for open heart surgery or for treatment of some difficult condition or disease.

Would the United States continue to have the quality lead in medicine if we were to move from our present programs of free enterprise medicine, sprinkled with our compassionate government-supplied programs which we have for our indigent sick? Isn't it time that each of us take the trouble to really inspect our own communities to learn who it is in our area that are not receiving the best quality medical care in the world?

A few of my colleagues in Congress tell me about heart-rending letters which they receive from their constituents under great hardship because of medical expenses and yet, if we will take the trouble to follow through on any one of these few letters received, if they will call upon a local official or a close personal physician friend to look into the complaint, in 999 cases out of 1,000 it will be found that the constituent is eligible to apply for voluntary health insurance, or that one of the programs established by some level of government will, if that person should present himself, supply the needed medical services either without cost or at cost which can be afforded by either the constituent or his family. Is this true in New Haven? Is it true in Connecticut? It is true in St. Louis. It is true in Missouri.

Thus far I have indicated the highlights of what I have found to be the case as pertains to quality of medical care and availability of service for all of our population. Next I wish to allude to a few statistics which apply to costs under the system of medical care which we follow in America as compared to the costs of programs under other countries' compulsory-type health care systems. Too few people are aware that under our system we are expending $25.2 billion annually to bring health services to our population. Private care costs in the most recent year available, 1959, according to reliable federal statistics, reached a total of $18.965 billion, while all levels of government expended an additional $6.23 billion. Private care expenditures break down as follows:

$4.998 billion for physicians' charges.
$5.514 billion for hospital charges.
$3.604 billion for drugs.
$1.963 million for dentists.
$1.185 billion for appliances.
$864 million for nurses, therapists, osteopaths, chiropractors, etc.
$220 million for nursing homes.

The proponents of national compulsory health insurance would have us add to our present $80 billion federal budget a large part of the cost of medical care which is now being borne independently of government? If they would but check a few of the other countries, they would find this additional tax load would be but a beginning of the ultimate tax increase Congress would have to vote if we imitated the foreign systems. I make this statement because it is history of government health programs that the medical care expenditures spiral upward when government takes over. This is because once the tax is imposed and the benefits are free, the benefits will be excessively used. Let me give you several examples.

The Province of Saskatchewan, which is immediately to the north of North Dakota, is a Province of people who look and act like our own. Should you cross the boundary from North Dakota into Saskatchewan, there would be few indications that you are not still in the United States. Prior to 1947, when Saskatchewan began their free hospitalization for the aged experiment, people over 65, on the average, utilized hospitals 2½ days per year. This was the same utilization rate for the United States for that same age group at that time and still is. However, after 13 years, the average person over 65 in Saskatchewan was found to be using a hospital bed 8 days per year. Just imagine what would happen to the $25.2 billion total expenditure for medical care here in the United States should we adopt such a system.

I am in possession of a letter from Great Britain which indicates that the average hospital stay for the total population because of hospitalization for medical illnesses averages 27.6 days and that the average stay in the surgical departments averages 13.4 days, whereas in the United States our average stay for medical cases is 10.3 days and our average stay for surgical cases is 7.5 days. The information on the U.S. experience comes from the U.S. National Health Survey Reports. Imagine, if you will, the increase in taxes we would have to vote, not to provide needed health services, but, rather, to satisfy the demands of a population which can get this extra care free. And if any person has in mind attempting to answer this argument with the statement that what I have pointed out only indicates that people don't get enough hospitalization, let me erase such a thought by repeating what I have said earlier. Our population lives longer, we have less incidence of disease than any of these other countries, because of our top quality preventive and curative medical care and the high standards of living which our people enjoy. The Blue Cross program directors would do well to inaugurate $25 or $50 deductible policies to offer to their policyholders. They would find that the premium they would have to charge would be so much lower because of the elimination of abuse resulting from this simple discipline that the deductible policies would out sell the first dollar of cost policies.

Under our system of free enterprise medical care, we know that on the average, every two years, since 1930, we have added a new four-year medical school so that now we have a total of 83. We know that our medical school graduates in 1940 totaled 3,745, and that last June our medical schools graduated 7,081, and that next year the rate will be correspondingly up. We know that our rate of hospital and other medical facility construction under free enterprise and our form of government exceeds that of the rest of the world. In Great Britain, bludgeoned by the high cost of their medical program, only one new hospital was built in the first 10 years of their socialized medicine program, thus indicating that government did sacrifice quality by permitting obsolescence and deterioration of their hospitals and health facilities.

The majority of the Congressmen who serve on the committees which have studied this legislation sincerely believe that if Congress should enact legislation to cover any segment of our society, whether that segment be the aged or the young, we will have established a principle which will yield to coverage of the total population. We know this by the experience of every foreign country, because none of them have stopped with coverage of a single age group without going the full route of coverage for the entire population. Indeed, there is no logic to limiting health care by the age of a person. If the United States Congress should imitate these foreign medical systems, we will be inviting the skyrocketing cost phenomena which have happened in all of the foreign countries. The $25.2 billion which is being expended today by our people for medical care will double or even triple if the experience of other countries proves the rule, and the increased money instead of being carefully spent under the discipline the individual person exercises over his or her own personal budget will be scattered and wasted. It will damage the effectiveness we derive from the expenditure of less funds.

Many people say, but let's do something. My answer is look what we have done in our society and are continuing to do. Government can help some, but the essential program must remain in the private sector. Last year we passed a supplementary program for the aged with low incomes, not so much out of necessity as out of a desire to be doubly sure that cost should not bar any person in our society from receiving adequate health care. It is the Mills-Kerr bill, which many states are implementing. The Department of Health, Education and Welfare, early this week said that more than half of the state legislatures had either enacted or were poised to enact legislation providing funds to match the federal contributions so that all those persons in need not as falsely stated "on relief" who are in a position to pay all of their living expenses, but not their medical care, will be assisted in that area. I call attention to a report which I shall put in the Congressional Record next week along with the speech. It lists over $3.75 billion annually being spent under the auspices of the federal government in programs in which it is actively engaged and it reveals also that an additional $5.731 billion is being paid out under federal programs on account of healtn and disability to more than 7 million beneficiaries. Realize, however, when you go through this list, that none of these programs is of a compulsory nature, such as would be a program financed under the social security system. Study, too, the provisions of the Kerr-Mills legislation which was enacted last Congress, and realize, if you will, that 25 states will have implemented this program before adjournment time in the state legislatures in this calendar year. I shall also put in the Congressional Record the letter I received from the British medical official which reveals several facets showing weaknesses in the British medical program. It shows me just enough to want Congress to inquire further into that program and the programs of several other of the foreign countries which have experimented with compulsory health systems. Because I have such a curiosity and because I believe the American people can benefit from the experience of these countries, I am urging my chairman, the Honorable Wilbur Mills, that we consider at the next committee meeting the feasibility and advisability of sending a delegation to make an objective study and to report on the advantages and disadvantages of government medicine before this Congress again considers the enactment of such a program for our population.

Finally, I want to call attention to a letter I received from Joseph P. Clark, President, St. Louis Labor Council AFL-CIO, in which he asked me if I would help vote out of committee a compulsory federal health care bill tied to the social security system, even though I opposed this approach.

I replied by pointing out that many times I have voted measures out of committee to which I was opposed if I felt the committee had done a study job which was sufficient to enable the House to come to intelligent decisions on the policy matters involved. This has not been done yet. In this letter I asked for some reciprocity on the part of the National labor leaders, who, in camera, decided several years ago to try to enact into law a compulsory federal health care program tied to the social security program. I asked them through my letter to Mr. Clark to listen in an unprejudiced way to the facts and arguments that I and others have advanced in support of what we believe is the most effective way to meet the problem of health care for the aged and why we feel the compulsory federal approach will badly damage and in no sense help to solve this important social problem.

Regrettably there has never been an appeal to reason on the part of the promoters of compulsory federal health care legislation from the beginning of their campaign to the present. The promotion has been an appeal to emotion not to reason. It carries with it a viciousness of attacking the motives of those who will not bow to their will that is foreign to honest public debate and not conducive to reaching an intelligent solution to the social problem. This matter became so serious last year that on May 2 I took the floor of the House to deliver an address entitled "Lobbying and Report: The Future of Representative Government in the United States." I was happy, Vital Speech Association selected this speech as one they republished. This speech needs to be read by all Americans, not just in relation to this issue and the rotten propaganda and political pressure techniques it embraces, but in relation to all legislative promotions going on in the United States today. As I speak there are paid teams going around my congressional district ignorant of the issues involved in the problem of health care for the aged but intent on one thing alone: to appeal to the emotionalism of my people and break my will to judge legislation on the basis of reason and true humanity.

Needless to say these efforts are useless. Yet if the people responsible for this kind of pressure will come to my office, which they never have, and sit down and discuss the matter from the standpoint of fact and reason they might be successful—if their cause is just. Their actions convince me that they do not believe in their own cause and for that reason if no other I am convinced their efforts are doomed to failure.

Most Heart Victims Can Lead Productive Lives

The vast majority of persons with heart disorders can be returned to happy, productive lives.

Writing in the recent Journal of the American Medical Association, Dr. Louis B. Newman of Chicago, said progress in education of the public and advances in medical research have made rehabilitation possible but anxiety still is a hindrance.

"Even though most persons with heart disorders are willing and able to work, many are unemployed —not on account of their heart disease, per se, but as a result of apprehension, anxiety, and fear brought about by ill-advised, unnecessary activity restriction, misunderstanding, and lack of orientation regarding their disease," he said.

"Whether at home on or the job, there must be a safe activity level for the patient.

"Special concessions or sympathy should have no place in the life of the cardiac patient. The proper occupational activity in most cases will not lead to progression of the heart disease or deterioration of the work capabilities of the person. On the contrary, many of these individuals show improvement while in an employed status."

Dr. Newman is chief of the physical medicine and rehabilitation service, Veterans Administration Research Hospital.

THESE 83,000 PEOPLE IN CONNECTICUT NEED MEDICAL HELP

Heart disease, cancer, mental illness — everyone knows the nation's three major medical problems. Do you know that alcoholism ranks fourth? In the state of Connecticut there are at least 83,000 alcoholics. These people need medical help. No one is in a better position to initiate and supervise a program of rehabilitation than the physician who enjoys the confidence of the patient or the patient's family.

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Special Article

SOME PSYCHOLOGICAL ASPECTS OF THERAPY WITH DRUGS

WILLIAM KAUFMAN, M.D., *Bridgeport*

PART II

Therapy with medications would be simpler if every patient who consulted a doctor were an emotionally well-adjusted individual. Often, the greatest barrier to successful treatment with drugs is that the patient seeks quite a different goal from the one his doctor has set therapeutically. The patient's resistance to treatment cannot always be overcome—and sometimes, the best compromise the doctor can effect is to obtain limited cooperation from his patient.

A special problem often arises when patients with such chronic diseases as diabetes, pernicious anemia, or heart disease feel impelled to deny illness by stopping health-giving medications. Or, when depressed, a patient may stop his medications as a suicide equivalent. In both instances, it is often possible through adequate psychological management to help the patient gain insight into his problems, and to prevent such episodes of unnecessary illness in the future.

THE PATIENT'S GOALS IN THERAPY

QUITE apart from a patient's complex reactions to both symbolic and pharmacologic action of drugs, there are many other reasons why successful treatment with medications is often not a simple matter. The first and most important stumbling block to successful therapy is that doctor and patient may have divergent goals.

The patient may not desire to have his health improved to the maximal degree possible. In fact, he may wish to improve his health in only limited ways; or he may want only to maintain the *status quo* healthwise; or he may wish to become even sicker than he is. Unless one can determine at the outset of therapy his purpose in seeking medical advice, therapeutic strategy cannot be planned to best advantage. Sometimes it may take considerable time and observation of the behavior of a patient under medical therapy to understand his true goals in seeking medical advice.

Here are some of the kinds of patients who consult doctors for examination or treatment for illness:

1. The emotionally well-adjusted individual is the ideal patient. When he feels sufficiently ill, he consults his doctor to find out what is wrong. If medications can correct or ameliorate his disorder, he will take these as prescribed and be glad when his health improves in response to treatment. Sometimes, he will also be grateful to his doctor.

2. Some patients with poor emotional adjustment to life may seek medical aid for various illnesses even though they would not submit to anything formally labelled psychotherapy. If such a patient is strongly motivated to recover from his ailment despite his continuing emotional dysfunction, he will often prove to be most cooperative in taking prescribed medications.

3. The sick individual who habitually enjoys important secondary gains from comfortable ill health may at times consult a doctor only to verify two facts: a) that although he is not well, there is no sign of rapid or serious deterioration in his health, and b) that there is little chance that he might spontaneously recover good health. Such a patient will often avoid taking any medication unless assured in advance that it will not cure his chronic ailment, but may only add to his comfort. Yet if he develops a new, life-threatening illness or a more serious complication of his chronic ailment, he will prove cooperative in taking drugs which tide him over the emergency and restore him to his formerly comfortable level of ill health. At this point, he will resume therapy only if he is certain that he is relapsing into more serious ill health. It is rarely possible through psychotherapy to bring such a patient to the point where he no longer needs the secondary gains which he gets from his chronic ailment.

4. A depressed patient may consult a doctor wishing to learn only that he is seriously ill. If he finds he is not suffering from a dread disease such as cancer or widespread tuberculosis, he will often not wish to accept treatment for lesser ills. With some difficulty, he may be persuaded to accept psychotherapy, pharmacotherapy, and electroshock therapy for his depression. But when the depression lifts spontaneously or through psychotherapy and adjunctive electroshock therapy, he may wish to have the benefits of medical treatment to add to his comfort or improve his health in some specific ways.

5. A patient whose religious convictions are such that he would not under any circumstances accept any form of medical or surgical therapy may consult a physician only if his employers or family insist on it. He will listen to the evaluation of his health status, but may prefer to die of a disease such as diabetes rather than take insulin and break the tenets of his religious beliefs.

6. Sometimes a patient desiring medical advice and help unconsciously fears that medications may harm him in some important way. For this reason, he may avoid taking whatever medications the doctor prescribes. Or, if he takes the medicine and experiences both therapeutic benefits and minor side effects, he may minimize or deny the benefits and maximize the ill effects. From this point onward, he may become seriously preoccupied with the possible meaning of trivial, temporary drug-induced symptoms. His preoccupation with transient side reactions may develop into the full-grown paranoid delusion that he has been permanently damaged in some way by the medications prescribed by his "enemy," the doctor. Later he may seek medical consultations only to confirm the delusion that he has been injured by these medications.

7. Then there are those sick patients who consult physicians seemingly to play a game.[4, 46] The patient knows the exact cause of his illness because he knows how he himself caused it. But no one else knows his secret. He may consult doctor after doctor, and spend considerable money getting medical advice and studies. He feels superior until the doctor solves the riddle. Such a patient is emotionally ill and needs psychotherapy.

He not only wishes to be sick, but he deliberately makes himself sick by the use of various drugs which he secretly self-administers orally or by injection into various parts of his body, including joint cavities, or by damaging his skin with strong irritating materials. Sometimes he creates his illness to get attention, sympathy, pity and other secondary gains. Often he wishes to punish relatives by causing anxiety and expense. He may wish to escape duties and responsibilities through illness. He may merely want the reputation of being a "puzzle" to doctors, and have the latent wish thereby to punish them (and, symbolically, other authoritarian figures) by making them seem fools. A few may induce illness to have contacts with nurses and doctors who give them the attention, kindness and sympathy they crave. Rarely, the person who creates a factitious illness does this to obtain financial compensation.

A wide variety of medications have been used to create self-induced illness, including excessive amounts of thyroid, digitalis, barbiturates, bromides, atropine, and benzedrine. Sometimes a patient takes overdoses of insulin secretly, and the doctor who sees him over a period of time may become convinced that he has an islet cell tumor of the pancreas, and the patient may even allow a surgeon to do an exploratory laparotomy or excise a portion of the pancreas.

8. There is the ritualistic, compulsive hypochondriacal patient whose purpose in seeking medical advice is to get his doctor's approval of the drugs he is already taking and to obtain some new drug which he can incorporate into his own system of private medical practice. He is so afraid of making himself sick that he will discard any medication that gives him "symptoms." He has convinced himself that he is suffering from a series of minor or major maladies, and emphasizes whatever troubles him most at any given moment. Sometimes he fears a single disease or diseases of a single organ. He may find himself in a psychological impasse where he seems to need not only his psychosomatic symptoms, but also the medicinal means of holding these in check. Thus, in the morning, he senses his nose is stuffy—and this he promptly treats with decongestant nose drops. Next, he notices the slight suggestion of a headache, which he knocks out with aspirin. He uses amphetamine, phenobarbital or tranquilizers to keep his nerves in shape; antacids to prevent postprandial sour stomach or gas. His day is not complete until he fights possible constipation with a good laxative and potential insomnia with a sleeping pill.

If such a patient develops a pneumococcal pneumonia, he will be happy to take a prescribed antibiotic, provided it does not interfere with his own scheme of self-medication. Sometimes he may forego taking his own remedies for the duration of intercurrent infection. But as soon as he recovers, he goes back to his usual method of self-medication. It is in this group of patients that one often finds drug allergy to some ingredient of proprietary or prescribed medications the individual has taken for short or long periods of time. If one interferes with the pattern of self-medication to the degree that the patient can no longer treat himself as he wishes, this can cause a depression, or permit some other underlying psychopathology to become manifest in a serious form.

9. Then there is the patient whose only reason for consulting the doctor is that he is lonely and looking for sympathy, kindness and attention. This patient often suggests that he needs "shots," usually of vitamins or sex hormones. This treatment gives him the emotional support of brief contacts with his physician, without making him feel he is ill or in need of psychotherapy. In the same class are some who from time to time develop a multitude of complaints from which they are relieved simply by sitting and talking with the doctor.

10. There is the patient whose only purpose in consulting a doctor is to be told how well he is. He will deny obvious ill health to the point where he refuses to take necessary medications, or to have such diagnostic studies performed as gastro-intestinal x-rays or an electrocardiogram for fear these might reveal disease. Sometimes such a patient, apart from insisting constantly how healthy he is, will warn: "I've come to your office a healthy person—and that's how I want to leave here."

11 There is the occasional patient who will not take medications as prescribed because he never wants to take "orders" from anyone. It helps to give him a note indicating several possible schedules on which he can take his medication, with the optimal schedule underscored, leaving the choice up to him. The usual result is that he takes the optimal dose but feels that this was purely volitional, and thus he was not submitting to the doctor's orders.

12. Many people consult one doctor after another to find out from an authoritative source if there is some medication which can improve efficiency or restore youth. This kind of person is narcissistic; he finds it hard to attain his social, occupational, economic or sexual goals. He seeks the symbolic and pharmacodynamic support of a drug as a talisman for competing more successfully with others. He easily becomes addicted to alcohol, barbiturates, sex hormones, narcotics and tranquilizing drugs. He may even become addicted to a symbolic medication which he thinks improves his strength, sexual capacity or appearance. For this reason, a doctor must be particularly careful what he prescribes for such a patient.

THE PATIENT'S DISEASE

Usually, a patient who wants to recover from illness feels very hopeful that the prescribed medication will effect a rapid cure. His initial set of mind is to like the medication and the doctor. If indeed his illness is a short one, if his recovery is complete and without untoward incident, if medical expenses are not too great, this patient will not have the time or reason to develop negative transference to drugs, disease or doctor. Upon recovering his health, in his positive transference reaction he will tend to attribute great knowledge, skill and wisdom to the doctor, and will regard the medication as a scientific miracle.

But many illnesses respond slowly to drug therapy; other ailments cannot be modified or eradicated by it. In many diseases, treatment with today's medicines provides limited benefits, and recovery depends primarily on the rate at which the individual's bodily defenses overcome the disease process. In some ailments, for as long as the patient takes the correct medication in proper doses, he will be maintained in good physiological equilibrium, but if he stops his drug, he again becomes seriously ill. Often a patient who benefits from a drug in some important respect simultaneously develops unpleasant or even dangerous drug-induced idiosyncratic, histamine-releasing, toxic or allergic reactions which preclude its further use in his treatment. In such instances, the patient may develop strong negative transference to the doctor and to medications in general. From this point onward, he may offer problems in medical management because of his constant anxiety and alerting reaction. He may develop an obsession about checking every aspect of therapy to find out in advance what kind of trouble to expect from treatment. Some patients may resist further treatment with drugs, and further consultations with doctors. One such patient said: "At least if I don't take medicine, I'll die a natural death."

Negative transference in patients receiving medications are most severe in the following situations: a) when the patient has been led to believe by his doctor that he will make a rapid and complete recovery, and instead his ailment drags on or worsens, b) if the drugs are both ineffectual and expensive, c) if the patient develops a drug allergy[5, 6, 39, 49] or some other complication, including symptoms of overdosage, drug intolerance, histamine-releasing phenomena,[44] idiosyncrasy, toxicity, or severe side effects, d) if the doctor shows annoyance with the patient's correct observations that progress toward recovery is slow, and medications being used do not seem to help, and e) if the patient thinks he is being charged too much for medical or hospital care.

On the other hand, if his doctor takes the time and trouble to prepare him for the emotional stress of prolonged serious illness for which current medications have limited value, then the patient's negative transference reactions tend to be brief and of low intensity, or may not occur at all. Most often under these conditions the negative transference is to the illness rather than to the doctor. Similarly, if the patient knows in advance the approximate cost of his medical bills, he is also better prepared emotionally for these.

In the course of any chronic illness a crisis in psychosomatic management may occur when the patient suddenly rebels against ill health and irrationally resists therapy with beneficial drugs. This despite the fact that for months or years previously he was able to take these life-sustaining medications without complaint and without having a serious emotional aversion to them. The diabetic patient may flee reality by stopping insulin, stating emphatically that he doesn't need it any more; the cardiac patient by stopping digitalis and adding much salt to his food; the patient with pernicious anemia by stopping B_{12} injections; and the severely hypertensive patient by stopping chlorothiazide, Serpasil® and ganglionic blocking agent.

The patient who denies illness in this way is often basically depressed. By rejecting necessary medications he is on the one hand testing reality to see if he is actually as dependent on these as the doctor implies—and on the other hand, he may be attempting to commit a symbolic or real act of self-destruction. However, most patients who experience ill effects from omission of necessary drugs, re-institute the proper regimen of medication and diet and may not deviate from it for long periods of time. Denial of illness through stopping necessary drugs may occur only once in the course of a chronic illness, or more often. When it tends to be recurrent, the patient stops his medications during those times when his life stresses become more than he can bear and when, in reality, he needs pharmacologic support more than ever.

To prevent denial-of-illness reactions, the doctor should give each patient good supportive, educational and reconstructive psychotherapy as part of overall medical management. There should not be too-long intervals between visits. A patient with chronic illness needs to see his doctor regularly, not only for evaluation of health status, but also for the opportunity to ventilate his problems and receive the emotional support he needs. If not, then even if the drug keeps him comfortable and adequately compensated in a pharmacologic sense, he may at times feel depressed and sick, and impelled to stop his medication or to take over-doses. In either case, by so doing he will obtain the extra attention he wanted from his doctor in the first instance.

Sometimes a patient who needs to take medications continuously to stay well will stop his medication or take overdosages, to obtain secondary gains by being relieved of responsibilities and being babied by his family.

For most people, carrying the burden of chronic illness creates an undercurrent of depression even when medications provide a reasonable degree of health and comfort. The doctor must be alert to help them at crucial times in their lives to develop a sense of values which makes it unnecessary to deny illness, to attempt symbolic or real self-destruction, or to regress into illness to obtain secondary gains.

Diseases which proceed relentlessly until death offer special problems in drug therapy and psychological management. The doctor must administer hope while at the same time he knows, and often the patient may also know but be unwilling to verbalize the fact, that no available drug can effect a cure. Thus, treatment of a malignant disease that has progressed to an incurable stage is directed toward keeping the patient as free as possible from pain and other untoward symptoms, and at the same time encouraging him to live as normal a life as the disease permits. Today's drugs skilfully used may prevent much suffering by making the patient unaware of many unpleasant aspects of the terminal phases of neoplastic or other fatal disease. But often the doctor must determine if it is better a) to allow his patient to have tolerable amounts of discomfort if at the same time this gives him a reasonable degree of alertness, or b) to give him such complete relief from discomfort that he will be dulled and drowsy, a drugged manikin who can do little but doze and slumber.

A patient with neoplastic disease such as leukemia, lymphoblastoma or Hodgkin's disease may have considerable temporary benefits from chemotherapeutic agents such as the nitrogen mustards, TEM (triethylene melamine) and related substances. When the drug-induced remission ends, the patient may refuse therapy with other drugs which might also induce further temporary remissions in the severity of his disease. Sometimes he can be persuaded to accept further drug treatment if he understands that by allowing his doctor to observe the effects of the new treatment, he is making a personal contribution to medicine which may help eventually to develop a cure for malignant diseases.

(This is the second of a series of four articles. The references will be published with the last article.)

The miracle behind miracles is that in nature there is no surrender.

PURPOSE...

In the path of any purposeful effort, there are obstacles that must be expected and overcome. For example, Blue Shield and the doctors who support it have not been without their share of problems in planning a program for care of the aged. Yet there has been no thought of giving up, for much has already been accomplished. As one doctor sums it up: "Blue Shield Plans already cover people over 65 in the same proportion as they exist in the population at large–and membership is growing at a faster rate in this age group!"

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Clinical Medicine

CONNECTICUT'S MEDICAL PROFESSION PLAYS ITS PART IN PROMOTING THE HEALTH OF THE SCHOOL-AGE CHILD

Martha L. Clifford, m.d.,* *Hartford*

PART II

The Connecticut State Medical Society's Contribution in Assuring School-Age Children Good Health, As Reported at the 1957 National Conference on Physicians and Schools.

As one of six states, Connecticut was invited to have its state medical society's representative report on activities for school health. Representatives of five medical societies in other parts of the country (California, Montana, Ohio, Wisconsin and Wayne County, Michigan) reported some excellent activities. The Connecticut report showed that although Connecticut was somewhat slow in starting its medical society program for school health, it has more than made up for lost time. In 1952, the state society appointed an advisory committee on health to its Committee on Public Health. The advisory committee consisted of five physicians in private practice, the State Commissioner of Education, the State Commissioner of Health, a representative of the Connecticut State Dental Association, and Charles C. Wilson, M.D., of Yale. The leadership of its two chairmen, Charles A. Murphy, M.D., of Stamford, and Joseph L. Hetzel, M.D., of Waterbury, outstanding as it was and is, in enlightenment and understanding did not surpass these qualities in the education representatives who have met faithfully at the monthly evening meetings. Tribute to Joseph A. Baer, Ph.D., who was the first to represent the State Commissioner of Education as a committee member and to Ruth V. Byler, Ed.D., who now represents the State Commissioner of Education is hereby given.

During the period 1952-57, Connecticut had many strong features on which to build an active program for helping the health of school children. We have active local boards of education and well-trained and interested members of the education profession; we have a higher than average number of physicians for the population, also the organized *medical profession* for years has shown an outstanding interest in community health problems by working on questions relating to the public health. For more than a decade the official state departments of education and health have had a joint committee—The Interdepartment Committee on School Health—also other organizations concerned with health have had active programs for years.

Among its major contributions, the Connecticut State Medical Society's Advisory Committee on School Health was responsible for promoting and establishing the Connecticut Advisory School Health Council. To achieve an advisory council of statewide educational and health organizations, the committee urged the State Commissioner of Education and the State Commissioner of Health to invite representatives of about 20 state-level organizations to a meeting for this purpose. Conditions which existed in 1954 when the Connecticut Advisory School Health Council was established are typified by statements such as: ". . . there appears, at present, to be little understanding of the *quality* which should be expected." and ". . . The present status of the Connecticut school health program shows little coordination and great unevenness." The state medical society's committee pointed out sixteen major areas in which the physicians of the state felt the school health program could be strengthened. "The major purpose of the Council is to bring together official representatives of the various agencies and groups (governmental, professional and voluntary) which have a direct responsibility and interest in and who have a contribution to make to the development and improvement of the school health program. More specifically, such a Council will advise and work with official representatives of the Connecticut State Departments of Education and of Health, two of whom will serve as co-executive secretaries of the Advisory Council. The Council will provide channels for advice and assistance among lay groups, voluntary professional groups and the agencies legally responsible for the school health program."*

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* *Director, Community Health Division, Connecticut State Department of Health.*

Connecticut State Medical Society invited and sent Dr. Clifford to represent the society at the Sixth and Seventh National Conferences on Physicians and Schools.

The mimeographed and printed materials available as the result of the work of the Connecticut Advisory School Health Council can be obtained by writing to the Connecticut State Department of Education, or to the Connecticut State Department of Health. In producing the materials, the Council collaborated with the Advisory Committee on School Health of the Connecticut State Medical Society on such documents as:

Record of Immunization and Tests (a standardized form)

A Suggested Self Study Guide for Developing School Health Policies

Suggested Procedures for Protection and Release of Children While in School

Recommendations Regarding Periodic Health Examinations for School Personnel, and

Functions and Qualifications for School Physicians.

Other materials produced by the Council include:

Basic Dental Health Recommendations

Statement to Schools of Connecticut Regarding Fluoridation, and

Suggested Teacher Reference Guide on the Subject of Fluoridation of Public Water Supplies.

All materials thus far produced by the Connecticut Advisory School Health Council, which have been submitted, have been accepted and adopted jointly by the State Commissioner of Education and the State Commissioner of Health and distributed jointly to Connecticut schools.**

There are many specific ways in which other committees have had a chance to collaborate on health problems affecting school children. An example is the work of the former advisory committee on ophthalmology of the Connecticut State Medical Society which gave advice to the Connecticut State Departments of Education and Health on a vision test referral form sent to parents. The representatives of the two state departments also worked with a committee of optometrists in preparing this form.

Another advisory committee of the Connecticut State Medical Society, namely, the Advisory Committee on Hearing composed of four physicians experienced in ear, nose and throat and who have a special interest in hearing problems, have helped to determine the policies used in the hearing testing programs of preschool and school-age children.

SUMMARY:

The National Conferences on Physicians and Schools sponsored by the American Medical Association have shown how physicians and educators together can plan for better health of school children without depriving the parent of his basic responsibilities and initiative in protecting his own child's health. The Connecticut State Medical Society has taken proper leadership in sponsoring a Connecticut Conference on Physicians and Schools and in other ways promoting inquiry into health problems of school children.

(This is the second in a series of four articles.)

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* From the Operating Code of the Connecticut Advisory School Health Council as adopted on September 16, 1954.

** Materials in preparation or under revision in 1960 include:

A Suggested Activities Guide for Dental Hygienists in Connecticut Schools

Guide to Supplementary Health Education Resources

Immunization Record

Functions and Qualifications for School Physicians

Recommendations Regarding Periodic Health Examinations for School Personnel

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Doctor's Office

Maxwell H. Bloomberg, M.D., announces the opening of an office for the practice of orthopedic surgery at 73 Cedar Street, New Britain.

Gordon Jonas, M.D., announces the opening of a second office for the practice of obstetrics and gynecology at 144 Golden Hill Street, Bridgeport.

Harold Schwartz, M.D., wishes to announce his return to the practice of radiology at 99 Pratt Street, Hartford.

Carlos B. Zilveti, M.D., announces the opening of an office for the practice of pediatrics at 175 Linden Street, New Haven.

Electrical Factors Blamed In Study Of Heart Attacks

Fatal heart attacks can occur in the absence of any new heart damage, a study indicated.

An autopsy analysis of 500 sudden deaths attributed to hardening of the coronary arteries revealed that 63 per cent of the victims had hearts with no acute anatomical damage, according to an article in the Journal of the American Medical Association.

The findings cannot be applied to the general population because the study group was weighted in favor of young persons and those not under regular medical observation.

Signs of recent heart attacks could explain 184 of the fatalities, or 37 per cent, but in the remaining 31 persons there was no evidence of recent heart damage, Drs. Lester Adelson and William Hoffman of Cleveland, reported.

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Around The State

Allergists Elected New Officers

The Section on Allergy of the Connecticut State Medical Society elected the following officers at its annual meeting: Irving H. Krall, President, Hartford; John F. Beakey, Vice President, Hartford and Marvin Mogil, Secretary-Treasurer, New Haven.

Fairfield County

Tibor de Cholnoky, M.D., has read a paper on "Plastic And Reconstructive Surgery Of The Face" at the King Edward VII Memorial Hospital in Hamilton, Bermuda.

Special Notices

FOURTH ANNUAL REGIONAL CONFERENCE OF THE NEW ENGLAND SOCIETY OF ANESTHESIOLOGISTS

to be held at
Wentworth-by-the-Sea, New Hampshire
Thursday through Saturday, September 14-16, 1961
For information and reservations contact:
Thomas K. Burnap, M.D.
New England Society of Anesthesiologists
P.O. Box 81 — Kenmore Station
Boston 15, Massachusetts.

PRE-CONVENTION SESSION ON SCHOOL HEALTH

The third Pre-Convention Session on School Health will be held at 7:30 p.m., Sunday, June 25, 1961, at the Park Sheraton Hotel in New York City. The theme for discussion will be "Health of the School Personnel."

Speakers will be: Lemuel C. McGee, M.D., president of the Delaware Medical Society and member of the AMA Council on Occupational Health; Gerhardt Rast, Ph.D., school administrator; Mrs. Doris Field, school nurse; and George L. Cushman, M.D., family practitioner.

AMERICAN PHYSICIANS ART ASSOCIATION

The 24th Annual Exhibition of the American Physicians Art Association will be held from June 26th to 30th in New York City in conjunction with the annual meeting of the American Medical Association. The exhibit will include works of sculpture, painting, crafts and photography by physicians throughout the United States.

Further information can be obtained from Alfred A. Richman, M.D., Secretary, 307 Second Avenue, New York 3, N. Y.

WOMAN'S AUXILIARY

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Report Of The President Of The Woman's Auxiliary To The House Of Delegates Of The Connecticut State Medical Society

It is an honor an a privilege, as President of the Woman's Auxiliary to the Connecticut State Medical Society, to present to you the report of the auxiliary's activities for 1960-61, its seventeenth year. The national slogan for the year has been to "Preserve and Enhance the Heritage of Medicine." We have endeavored to live up to this theme.

First, I would lik to say that the accomplishments of the year were dependent upon and are the direct result of the sincere interest and active cooperation on the part of the officers, committee chairmen, and members of our organization.

At the national convention of the auxiliary to the A.M.A. in June, I saw the auxiliary in action. It was a wonderful and a stimulating experience. In the Fall, the President-Elect and I attended the conference for Presidents and Presidents-Elect in Chicago. This, too, was a very worthwhile experience.

The first Board of Directors' meeting was held in conjunction with a training program, or organizational meeting, for the purpose of familiarizing all county officers and chairmen with the aims and purposes of the auxiliary, and the methods by which we hoped to accomplish them. We have eighteen active standing committees on the State level.

In planning and executing our projects for the year, we have continued our close collaboration with the Connecticut State Medical Society, through its sub-committee on Health Careers, in a program to alert high school youth to the opportunities of medical and allied on the National level and their Senators and Representatives regarding favorable legislation on the State level. We were pleased to cooperate, when requested to do so by the Medical Society, through a sub-committee, in trying to get the General Assembly to adopt a law which would allow adequate provision for animal research.

The auxiliary cooperated with the Junior Chamber of Commerce this year in the collection and distribution of unused samples of medical and surgical supplies. This project, which has been known as the Medical and Surgical Relief program in prior years, has now become the Junior Chamber of Commerce "Operation—J.C. Doctor." This collaboration came about as a result of a letter from the Council of the Medical Society to the auxiliary to the effect that the Junior Chamber of Commerce had been granted a request to launch such a program providing the auxiliary was allowed to participate. To date eight to ten truck loads of medicine have been collected and six to eight tons of medical reading material have been collected for shipment overseas. This program has been suspended for the time being.

Community service has been stressed during the year. Throughout the State doctors' wives have been interested and active, both as auxiliary members and as individuals, in all fields of community volunteer work—State fairs, bloodmobiles, hospitals. Gifts have been collected and recreation planned for patients in the mental hospitals. Members have participated in the "Meals-on-Wheels" Program for shut-ins. Members have been active in Safety programs and in School Health programs. The report of our School Health Chairman, published in the Fall Quarterly, was so well acclaimed by the Advisory School Health Council that copies of it

38th Annual Convention W.A. to A.M.M.—New York, N. Y.—June 26-30, 1961

were mailed to the other thirty representatives asking them to emulate it for their respective medical careers. This has been done in various ways; through programs in P.T.A., panel discussions, tours of hospitals and laboratories, teas and movies. Seventy-seven schools have been contacted and fifty-five film programs given. $4500.00 has been given in scholarships, $1600.00 for medical students and $2950.00 for nurses and medical technologists. The Connecticut Health Careers program has won recognition by the National Auxiliary as being outstanding. Our Chairman was invited to give what has become known as "The Connecticut Story" at the National Convention last June.

The American Medical Education Foundation has been another successful project this year. More than $2800.00 has been raised through dances, card parties, and the sale of cook books. With a membership of 1155, our contribution to A.M.E.F. averages more than $2.40 per member.

The official publication of the Auxiliary is the *Connecticut Quarterly,* published four times during the year. It is financed from the budget and through advertising the Connecticut Medical Services, Inc. to the extent of $400.00 annually. A page in *Connecticut Medicine* has been made available for our use. There are 335 subscriptions to the Bulletin, the national publication.

The Civil Defense Chairman and her committee have been active. A survey of available services in the towns has been made and a file compiled of auxiliary members and how they could best serve their communities during times of emergency.

Our Safety Chairman has been appointed by the Governor to the Women's Traffic Safety Council.

Letters were mailed to all auxiliary members, asking that they contact their Congressmen and Senators regarding favorable legislation organizations The Auxiliary has been represented at the Governor's Conference on Recreation and the Governor's Conference of Aging.

At the request of Dr. James Raglan Miller, representing the Connecticut State Medical Society, auxiliary members assumed the responsibilities of registrar and hospitality at the first Homemaker Service Conference in Connecticut in December. It is hoped that this is a step in the establishment of such a service in Connecticut. Participation in programs such as this create a public awareness of the interest of the auxiliary in community health.

Several attempts have been made to interest our one unorganized county to join us in our efforts to promote the aims and purposes, the hopes and ideals of the medical profession. We need and we would be glad to welcome the support of Tolland County.

There have been held during the year two regular meetings, five board of directors meetings, and one organizational meeting. It has been my pleasure and my privilege to preside at all of these meetings and to head for a year, under the able guidance of our National President, Mrs. William Mackersie, the Woman's Auxiliary to the Connecticut State Medical Society.

Respectfully submitted,
Mrs. Morton Arnold, *President.*

Letter To The Editor

April 19, 1961

Dear Dr. Nahum:

My purpose in writing is to bring to the attention of the members of the Connecticut State Medical Society the activities of the Joint Conference Committee of the Connecticut State Bar Association and the Connecticut State Medical Society. This Joint Conference Committee was formed within the past ten years for the purpose of exploring any problems which might arise between these two professional groups and to improve the cooperation between the Medical and Legal professions in our State.

A pamphlet entitled "Principles of Cooperation" was printed and circulated among the members of both professions. These principles were not made as rules and regulations but rather as a suggested code of conduct. During the past year, the Joint Conference Committee has spent much of its time in discussing the manner in which local Medico-Legal Joint Committees could be formed at the community level to further expedite understanding and cooperation.

With this in mind, the "Principles for Cooperation" is being reprinted and will be recirculated to all lawyers and all physicians in the State of Connecticut. A letter explaining the purpose of the "Principles for Cooperation" will be enclosed. In addition, the Presidents of the local Bar and Medical Associations are being encouraged to cooperate in the formation of Joint-Medico-Legal Committees at the Community level.

Because of the increasing national interest in Medico-Legal problems which is quite evident by the numerous articles found in medical and legal journals as well as in the small monthly journals such as *Medical Economics* and *Modern Medicine,* the Joint Conference Committee of the State of Connecticut is exploring the possibility of a monthly column or page in *Connecticut Medicine* to keep the members of the Connecticut State Medical Society abreast of the latest developments in this field and in the discussions of the Joint Conference Committee of the State Bar and Medical Associations.

This Committee welcomes any suggestions from members of the Connecticut State Medical Society and encourages the presentation of any Medico-Legal problems for discussion at the Committee's meetings.

Peter V. C. Dingman, m.d.
Chairman—Medical Section Joint Conference Committee of Connecticut State Bar Association and Connecticut State Medical Society.

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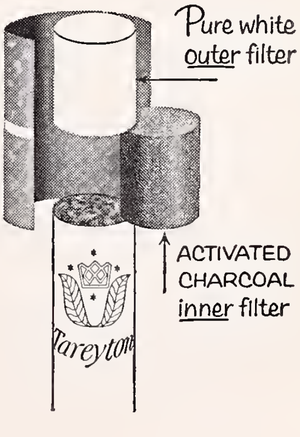

Book Reviews

THE PATHOLOGY OF CEREBRAL PALSY. Abraham Towbin, M.D. Charles C Thomas, Springfield, Illinois, 1960, 206 pp.

Reviewed by Russell Fuldner

Any medical specialty unsuccessful in arranging a decent marriage with pathology is likely to lead an apologetic sort of life, clinging uneasily to the fringes of scientific respectability. Osler, essaying the study of cerebral palsy in one of his earlier contributions seventy years ago, found its pathology unsatisfactory, "an outline for our ignorance." While not specified by Sir William, the failings of the pathology of his day were, charitably estimated, three: barren clinical data, lack of pre- and post-mortem correlations, and total misconstruction of pathogenesis. Considering the source of material the first of these deficits was inevitable. Specimens came largely if not entirely from institutions providing custodial care for children with major degrees of mental and physical devastation. (Of diplegics Osler remarked: "The mental condition is profoundly disturbed; the patients are usually imbeciles or idiots, helpless in mind and body.") Even today this remains true to regrettable degree. The second failing we may venture to hope is in process of correction. But the unquestioned stride forward — taken during the past two or three decades — has been in the matter of pathogenesis. The basic role that anoxia plays in producing the characteristic lesions of cerebral palsy has been delineated in large measure, in the United States at least, by Cyril Courville of Los Angeles. Anoxia's effects are now further documented in Doctor Towbin's monograph, his longest and strongest chapter being devoted to the topic.

Having conducted his research partly in central Europe, the author uses the local term for the lesions of cerebral anoxia: *elective parenchymal necrosis*. The simplicity of Courville's *anoxic lesions of the brain* may commend itself to American readers. According to Towbin, the hallmark of anoxic brain injury is ischemic neuronal necrosis, which he describes in detail. In shaping his text the author seems to have had in mind the student rather than fellow pathologists. His style is pleasantly clear and unencumbered, and he is sometimes considerate enough to show us the normal structure alongside the illustration of the abnormal. These admirable efforts on the author's part have been abetted by the publisher in providing a well printed, easily handled volume.

In words and abundant photographs Doctor Towbin portrays the late lesions which evolve from ischemic necrosis and the accompanying involvement of glia and blood vessels. From these basic reactions of parenchymal, supportive and vascular tissues are derived the ultimate brain stigmata of cerebral palsy: convolutional and lobar sclerosis of the cerebrum, cerebellar atrophy, status marmoratus of the basal ganglia, and porencephaly. Here the writer is at his best, demonstrating the effects of anoxia in a manner to leave no doubt in the reader's mind regarding the part they play in cerebral palsy. The same may be said of the discussions of kernicterus and prematurity.

So far as ensuing material is concerned one would quarrel less with the subject matter than with its ordering. Neuronal storage diseases, the demyelinating diseases and neoplasms do not constitute cerebral palsy according to most definitions, including Doctor Towbin's own ("non-progressive quality . . . is one of the basic criteria"). The author's explanations of these inclusions suggest that he may not be completely happy with the arrangement. Would it not be preferable to gather material of this sort into a separate chapter clearly labelled: *The differential diagnosis of cerebral palsy?*

Doctor Towbin's hand grasps somewhat uncertainly on the tiller as he guides us over the treacherous shoals of endogenous and exogenous fetal defect. Cases subsumed under the heading of developmental defect — again a term "outlining our ignorance" — provide the student with as scant satisfaction as those reviewed by Osler, and for rather similar reasons. This is not the author's fault; such is the state of our science. But like many a lesser mariner Towbin has found irresistible the siren call of irradiation and material rubella in pursuing his quest for the sources of cerebral palsy. Of rubella the author says (page 52): "In children with antecedent intrauterine exposure, mental retardation, motor defects and other central nervous system disturbances are reported." So far as motor defects of the extremities are concerned this is not true. At least it is not true in the sense implied — that motor sequelae occur in ponderable measure, as is the case with mental retardation and other central nervous system disturbances. In the hundreds of cases of maternal rubella now documented in the literature fetal motor defects—other than extraocular—occur only rarely.

As for irradiation, studies from Nagasaki and Hiroshima have thus far failed to reveal any significant incidence of motor defects (again excepting extraocular) as a consequence of intrauterine exposure of the fetus to atomic bombing. Motor sequelae other than strabismus and nystagmus are in fact so unusual in the children exposed in utero to the bombs that one might reasonably conclude fetal irradiation to be an unlikely forerunner of cerebral palsy. While Towbin is unfortunately correct in stating that "many cases of cerebral palsy have been directly attributed to maternal assault" by rubella and irradiation the reader deserves to be warned that the attributions represent attempts to assimilate to cerebral palsy pathogenic mechanisms known to be concerned in other types of congenital defect. We are dealing here with plausible analogy, not with case reporting. Without question the intrauterine environment can be affected, by man as well as nature, in ways to produce catastrophic effects on the developing fetus. It has yet to be shown that maternal rubella and irradiation ordinarily act in this way to produce cerebral palsy. Indeed, the weight of clinical evidence bearing on the point, which by now is considerable, strongly suggests they do not.

The untutored reader is likely to be led more than a little astray by the heading of the book's last chapter: *The Oligophrenic Triad: Mental Deficiency, Epilepsy and Cerebral*

Palsy. Even now cerebral palsy, viewed as a fragment of language, struggles with an overload of semantic ambiguity and misinterpretation. This last unkindest cut is more than it deserves to bear. The relationship among these three diseases, however suggestive and valuable to the synthesizing pathologist, is far from inevitable; each may occur independently of the others and frequently does. Yet if a case must be made for the linkage there is surely none for equating cerebral palsy with oligophrenia, i.e., mental deficiency.

What the clinician would dearly love to see on his bookshelf is a pathology text to illuminate the status and behavior of the patients he deals with every day. These children come and go in dispensary and rehabilitation center, exchange tit for tat with their siblings, travel each day on their special bus to school. The abler among them, perhaps helped by braces, manage to reach school on their own. They are not so very different from other children — except for arms and legs, that is, and maybe a quirk or two. In adolescence and maturity they arrive at their own compromise with life, finding means of adjustment sometimes startling to their elders. . . . Here is the pathology we should like to know. It is not easy to come by, the literature providing but few examples[1,2]. To assemble and annotate material in this sphere the pathologist will require as much help as he can get from clinician and experimental primate laboratory. But Doctor Towbin, possessing great gifts as teacher and writer, is obviously superb pathologist and devoted scientist as well. We may thus expect to find, when a paragon of texts is finally brought to press, that he has been the author, the present volume its first form.

1. Crothers, Bronson and Cobb, Stanley: Report of a Case of Progressive Athetosis with Lesions in the Basal Ganglia. New Eng. J. of Med., Vol. 203, No. 5: 213, 1930.

2. Gesell, Arnold and Zimmerman, Harry M.: Correlations of Behavior and Neuropathology in a Case of Cerebral Palsy from Birth Injury. Am. J. of Psych., Vol. 94, No. 3: 505, 1937.

OUR OBSTETRIC HERITAGE—THE STORY OF SAFE CHILDBIRTH by Herbert Thoms, M.D., Professor Emeritus Obstetrics and Gynecology, Curator Yale Medical Memorabilia, Yale University. The Shoe String Press, Inc., Hamden, Connecticut, 1960, 164 pp. $4.75.

Reviewed by Stanley B. Weld

The author of this interesting volume, Dr. Herbert Thoms, is pre-eminent as Connecticut's foremost medical historian. It is significant that he has seen fit to begin and end his story of the progress of obstetrics with the discussion of two developments in which he is vitally interested and in which he has played a major part, the nurse-midwife and the natural childbirth program, better termed preparation for childbirth. To Dr. Thoms is due the credit for the introduction of nurse-midwives in the programs of the Yale School of Medicine and the Yale School of Nursing. To him also American obstetrics owes much in his development at Yale of a sound and practical preparation-for-childbirth program. The acceptance by the medical profession of these two developments in the art and science of obstetrics has not been compatible with the jet age in which we live, but it is becoming realized more and more that good obstetrics includes a personal interest and, in labor, a hand for the patient to hold as well as a skilful obstetrician in attendance.

This is an engaging tale beginning with the earliest written medical records from Mesopatamia and Egypt and continuing into the present century. Not all will remember that Anne Hutchinson was New England's most celebrated midwife. Her unfortunate reputation as a witch has clouded the picture. Dr. Thoms gives us a sketch of Ambrose Paré and his great contribution to obsetrics, of William Harvey, the anatomist, who was a practical and experienced obstetrician, and of the Chamberlins with their secret invention of the forceps which they were bound by custom to apply under a sheet, the ends of which were tied to the accoucheur's neck. William Smellie, William Hunter, Jean Baudelocque and John Burton in Europe, and William Shippen and Samuel Bard in this country bring the story down to the dawn of the 19th century. Then there are the exciting details of the development of the cesarean section, of the struggle for a place for obstetric anesthesia, and the puerperal fever controversy which immortalizes the names of Pasteur, White, Gordon, Semmelweis, and our own poet-physician, Oliver Wendell Holmes.

It is a glorious heritage indeed. Tribute is fittingly paid to the accomplishments of Theophilus Parvin in several of our medical centers, Walter Channing and William Richardson in Boston, and most of all to John Whitridge Williams, Hopkins' great obstetrical leader. There are many others. The field has been meticulously covered in a volume of about 150 pages, beautifully illustrated and written in a style to hold the interest of historian, obstetrician, and layman.

Medical history is the richer for this charming treatise.

HUMAN PITUITARY HORMONES, Volume XIII, Ciba Foundation Colloquia on Endocrinology. G. E. W. Wolstenholme and Cecilia M. O'Connor, Editors for the Ciba Foundation, Little Brown & Company, Boston, Massachusetts, 321 pp., $9.50.

Reviewed by Denis Abelson

In August, 1959, a symposium on human pituitary hormones was held in Buenos Aires. The meeting was arranged in honour of Prof. B. A. Houssay by the Ciba Foundation, to whom credit is also due for prompt publication of this record of proceedings. As the Conference Chairman, Prof. F. G. Young, pointed out in his opening remarks, Shakespeare's observation that 'the toad, ugly and venomous, wears yet a precious jewel in his head,' forshadowed by several years Houssay's valuable contributions on the toad hypophysis.

In the opening paper, Joplin and Russell Fraser define the radiological anatomy of the human female pituitary, and a discussion followed of the relative merits of surgical ablation and transphenoidal insertion of radioactive yttrium or gold seeds in the treatment of advanced carcinoma.

For many years research into growth hormone was hampered by the ineffectiveness of the bovine and porcine hormones in man. The demonstration that monkey and human growth hormones are active in the monkey and man has reawakened interest in the field, and the problems of fractionation of human pituitaries are reviewed by A. E. Wilhelmi. Various aspects of the physiological response of the human to administered growth hormone are covered in communications from several groups.

Read and Bryan outline the application of an immunological assay of growth hormone to the measurement of serum levels in normal children and adults, and in patients with acromegaly and hypopituitarism. Other papers deal with assay methods for thyroid-stimulating hormone in blood and gonadotropins in urine.

C. H. Li reports the preparation of human follicle-stimulating and interstitial-cell-stimulating hormones in highly purified form, and presents evidence to distinguish them from the respective sheep hormones, both physicochemically and biologically. A highly purified fraction exhibiting follicle-stimulating hormone activity is also described by Gemzell and co-workers. The chemical structure of human corticotropin and melanocyte-stimulating hormone is discussed by workers from Yale and Cambridge.

The book as a whole constitutes a refreshing and valuable guidebook to current research in this rapidly advancing field.

WHAT NEXT DR. PECK by Joseph H. Peck, M.D. Prentice-Hall, Inc., New York, 209 pp., $3.50.

Reviewed by Denis S. O'Connor

This is the personal story of a railroad doctor's life in the West in the early part of the present century with all the well-known stories of those who sought the wealth of those lands and the tragedies which all too often were the endings.

While there is very little in this book which hasn't been said by others many times, it is interesting to note that a doctor who had lived and practiced under very primitive conditions could, in his later days, turn to writing and be successful in the publication of his experiences.

PHYSICAL SIGNS IN CLINICAL SURGERY, Thirteenth Edition by Hamilton Bailey, The Williams and Wilkins Co., 1960, 868 pp., $14.50.

Reviewed by Denis S. O'Connor

While no book which has gone through thirteen editions, numerous reprints and several foreign language editions requires editorial praise to further its popularity, any book which serves a real purpose should be urged upon those by whom it is needed and to whom it will have value.

In this day of scientific medicine when the emphasis in teaching is upon the laboratory aids to diagnosis to the de-emphasis, if not exclusion, of the value of physical examination a volume on the phyiscal signs, the technique of elicitation and superb illustrations in close relation to the text is almost a necessity for the beginner in medicine if he is to become a competent diagnostician. And not only for the beginner but for everyone in the practice of medicine this book should be one of the most important working tools on his office desk.

Faced with an obscure problem in diagnosis, as we all are at times, reference to this book could well lead the reader out of the woods and into the clearing.

Only the text necessary to define, or explain, is used. The illustrations in color where color is necessary are so well placed as to be worth literally a thousand words. Individuals, living or dead, who are referred to in the text are identified in a footnote and words of foreign language derivation are dissected for clearer appreciation of meaning.

The book is beautifully printed in a very easily readable type and after even a casual perusal of the book one can easily understand its' many editions and its' translations into other tongues.

JEWISH MEDICAL ETHICS. Rabbi Iammanuel Jakebovits. A Comparative and Historical Study of the Jewish Religious Attitude to Medicine and its Practice. Philosophical Library, New York, 381 pp., $6.00.

Reviewed by Louis H. Nahum

The author is a prominent Rabbi in New York and was until recently Chief Rabbi of Ireland. The treatise was originally presented to the University of London as a thesis for the doctorate of philosophy in 1955.

It is the author's thesis that Jewish law, meaning that which is derived from the Bible as interpreted by the Rabbinate throughout history is a set of reasoned pragmatic rules of morality. That the conscience of scientists and doctors cannot and should not replace religion as a guide to moral conduct. Therefore that doctors must turn to competent experts meaning the Rabbinate for the solution of moral and religious complications arising out of his practice. However, the various Chapters are mainly historical and are intended to be used by "qualified scholars" in each individual case as it arises. They are really a survey on the development of views and teachings in that area where the vital disciplines of human life meet and overlap — Religion, Law and Medicine. The reader is greatly helped by references to the Bible. There are many copious notes and direct quotes from the "Shulhan Arukh" the last authentic Code of Jewish Law. There is a very excellent bibliography as well at the end of the volume.

The subjects treated include eugenics, sterilization, abortion, euthanasia, anatomical dissection (post mortems) and the Jewish attitude toward faith healing and irrational medical beliefs.

The author emphasizes that throughout history the Jewish religious approach to man was total, diercted to preservation of a healthy body as well as a healthy soul. For this reason rules of hygiene were always an integral part of religious practices. Maimonides emphasized this point, insisting upon the fact that every man has a duty to take care of his health in order to be able to serve God with all the vigor of his body and the lucidity of his mind. For this reason the Jewish religion never fell into the error of faith healing as by the early Christian followers but rather took its cue from Ecclesiastes where it is said "Honor the physician for the Lord hath created him." To honor the physician meant more than the man as healer, but rather also his work, his knowledge, his discoveries.

The volume should be welcomed by laymen as a standard work on the relations between religion and medicine. But certainly it has a special interest for historians and theologians as well as physicians. This reviewer is struck by the fact that although Jewish law is generally more severe in its moral discipline than those of other religious systems since it penetrates into every part of man's physical and mental being, on many occasions it reveals itself more supple and tolerant than other systems. Thus when a conflict arises between a religious principle and a vital necessity, the law frequnetly permits a resolution which takes into account the vital necessity and admits exceptions, of course within well defined limits. Thus it tolerates in exceptional circumstances not only post-mortems but sterilization and even the destruction of the embryo. It is just this type of reasoning that has made possible the flourishing of medical schools in Israel where post-mortems are a necessity for teaching purposes as well as in furthering the growth of knowledge. A similar attitude prevails in the Albert Einstein College of Medicine of Yeshivah University in New York.

How is this latitude of judgment brought about? Apparently Jewish ethics prefers treating the problems raised by health considerations and vital necessity as individual cases and not in a dogmatic fashion. After conscientious examination of all the pertinent factors, it can justify exceptions. Judaism feels so secure in its moral principles that it can tolerate exceptions without fearing that this will do violence to the principles involved. It does not fear that an exceptional ruling will undermine its authority. As Rabbi Munk points out in the foreword "the principles are strict but in their application, human and clement, as they concern the individual person." Thus in the field of medicine it is the human factor of the ethical code which operates even as it does in the field of civil and criminal law.

This reviewer has long sought whatever grounds that may exist for the reluctance which many orthodox Jewish Rabbis exhibit in advising families with regard to granting permission for post mortems. He was accordingly gratified to find that ample precedence exists in Jewish law for sanctioning the practice of anatomical dissection. Those of us who recognize the importance of post-mortem studies in the progress of medical knowledge and the help this type of study may afford to the living, will be gratified also at the enlightened way Rabbi Jacobovits has clarified this knotty problem. Any physician who encounters opposition on this score from his Jewish orthodox patients would do well to acquire this treatise to help overcome the prejudice against post-mortems. All the other problems dealt with have long come under the regulation of secular laws and are therefore now only of historial interest.

AN APPLICATION OF PSYCHOANALYSIS TO EDUCATION by Richard M. Jones. Charles C. Thomas, Springfield, Illinois, 1960.

Reviewed by Neil Friedman

So long as it was assumed that education is merely a matter of mastering an external world which is real—a world which is "out there" and which has an independent "there," as the existentialists say—so long as it was assumed, academic education had to be restricted to the training of the logical mind in the facts of a particular discipline. The resolution of this Cartesian dead end was effected by the generation of social and physical scientists which reached maturity toward the turn of the 20th century. And just as the influence of the observer upon his observations was being discovered, Sigmund Freud was casting a searchlight of unheard of intensity into the darkest recesses of the indivdiual—the individual as a child, as adult, as observer. Freud's own concepts of transference and counter-transference represent a bridge between the two developments. Psychoanalysis is part and parcel of the existential revolution.

Unfortunately, education still resembles the ostrich with its head in the sand. The "curricular lag" has disregarded the inalienable fact that "we cannot perceive the outside without distorting our very perceptions unless we search out individually the sources of error which lie hidden within." And the result of such activity would be no merely "useless" knowledge: Lawrence Kubie in "Some Unresolved Problems of the Scientific Career" writes that

> Science in the abstract and Scientists as human beings pay a high price for the fact that during the preparation of young people for a life of scientific research their emotional problems are generally overlooked.

Lasswell indicates the effects of this myopic approach on still other professions:

> Our thesis is that our faith in logic is misplaced . . . A totally different technique of thinking is needed to get on with the task of ridding the mind of the distorting results of unseen compulsions. Since our schools have found no place for the cultivation of this additional technique of thinking, our judges and administrators and policy-makers are turned loose on the world armed with faith in logic and incapable of making their minds safe for logic.

To put it more dramatically, Norman Brown warns that "the malignant death instinct could unleash those hydrogen bombs." If Dr. Brown's supra-personal villian be interpreted as acting through the emotional immaturity of some high-placed child, through "some asanine act of some asanine second lieutenant" (Ferlinghetti), then the importance of making emotional maturation a part of education becomes incredibly real.

The question of course is how to do so. *An Application of Psychoanalysis to Education* by Dr. Richard M. Jones of the Brandeis University psychology department is a report of one successful attempt. The study was conducted in two similar New England preparatory schools. The experimental group consisted of 19 seniors who elected to be members of a (do not judge the depth of the study by its naive title) "Self-knowledge Workshop". Before and after the full year program control and experimental groups were tested to determine attitudes of self-acceptance and ethnic prejudice. The author sought to offer a school course that explicitly set as its goal the "learning" of self-knowledge at depth, according to the combined principles of psychoanalytic group psychology and traditional classroom practice.

The bulk of the book is narrative. It represents selections from the free discussions which the girls "led", at first hesitantly, then defiantly, and finally more maturely. The author follows the "group's personality" as it telescopes within a year Erik Erikson's stages of psychosocial development—from the initial infantile crisis of trust vs. mistrust through the phase-specific adolescent crisis of identity vs. identity diffusion. The battery of tests showed qualitative and quantitative increases in self-acceptance (which is really the opposite of arrogance) in the experimental group and a corresponding decrease in bigotry. What one can accept in himself, he does not have to project onto imaginary enemies.

If there is anything one can object to in this excellent study, it is precisely the fact that it is a "study." At least twice Dr. Jones threatens to open up whole areas of immense theoretical and practical importance ("Thus normality hangs in the balance of the oedipal crotch, so to say. . .") but then quickly retreats to his own experiences with the warning not to generalize too much. The advice is well-taken, true, but one could still have hoped for a bit more explicit dreaming and daring, for it is in the very implications of this fine little book that the promise of education lies.

CONGENITAL MALFORMATIONS. G. E. W. Wolstenholme and C. M. O'Connor, Editor. Ciba Foundation Symposium. Little, Brown and Company, Boston, 1960, 308 pp. $9.00.

Reviewed by Louis Gluck

Many branches of biological science are very tired. One of the most tired of these deals with congenital malformations. This symposium brings together 29 participants from 6 different countries who discuss various aspects of congenital malformations and who contribute very little worthwhile. The volume is remarkably naive for so distinguished a group of participants. The contents include the usual papers on production of anomalies by "Brand X" with virtually no attempt to relate to mechanisms; nonsensical quasi-scientific data to two decimal places classifying congenital anomalies by birth certificate and being very careful to exclude mental retardation, fibrocystic disease, phenylketonuria, etc.; some passing generalizations on "genetical causes of malformations"; some very dangerous generalizations presented as dogma on "environmental factors" in causation of congenital anomalies; and other disappointing presentations. C. E. Ford's discussion of chromosomal abnormality and congenital malformation is quite good and the paper on congenital runts by McLaren and Michie is also interesting.

This volume points up the extreme need of this field to avail itself of the methods and concepts of genetics, biochemistry, and biochemical embryology for guidance to pull it out of its self-created morass of fuzzy thinking. The fact that large doses of vitamin A, for example, can cause congenital anomalies is interesting; it is, however, time to say, "So what? *How* does it cause anomalies?" Certainly current contributions in the field of congenital malformations as exemplified by this volume will never answer questions of "how."

In summation, this volume is hardly worthy of recommendation as a mainstay of the bookshelf.

THE CRANE PLAN is the fruit of 30 years experience and research in billing and collecting current and past due accounts for members of the Connecticut State Medical Society.

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CONNECTICUT PHYSICIANS ART SHOW – 1961

The Connecticut Physicians and their families held an art exhibition in conjunction with the meeting of the Connecticut State Medical Society, April 25 to 27, 1961.

There were one hundred and seventeen exhibits comprising Oils, Pastels, Water Colors, Ink, Crayon and Charcoal Drawings, Photos, Tempora, Ceramics, Stone Sculpture and an Aluminum Mobile.

The classifications were divided into Professional, Amateur, Beginners, as well as children, in each medium. This made quite a bit of difficulty in judging to satisfy all the exhibitors, but the ribbons were finally distributed to the best in each class. Mrs. Rosenthal of West Hartford took first prize in Oils and The Best in Show. She has recently been honored as a permanent exhibitor in the Hartford Aethenium.

The entries were judged by three well known artists in the State, Mr. Stanford Lowe of Hartford and New Britain, Mr. Steven Dohanos of Westport and Mr. Richard Brown of Madison.

Dr. W. W. Wright of West Hartford won second prize with an impressionistic "Hillside". Third prize to professionls was awarded to Ruth Waskowitz of New Britain for a beautiful portrait of "Mary Jean" and honorable mention was given to Mrs. Ruby Gilman of New Haven for a panorama entitled "Winter Majesty".

In the amateur class, Dr. Richard Starr of New London was awarded second prize for a scenic in oil of an "Old Dam Site".

In the beginners in Oil, Dr. Daniel Samson of Thomaston unanimously took first award with a scenic of a "Golf Course", while Dr. E. Williams of Naugatuck took second prize with another scenic oil entitled "Rainy Night", and Dr. Joseph Burke of Waterbury was encouraged in his efforts by third award for a picture of the "Triton at Rock Harbor".

Dr. Tibor de Cholnoky of Greenwich was awarded two first prizes in Water Colors for a "Landscape" and in Ink Drawing for an "Apple Tree".

Dr. Margaret McLean drew second prize for a Water Color "Kings Point".

Dr. L. Verstandig of Hamden displayed a group of colored photographs among which "Jamaican Peddlers" won first prize in photography.

Altogether, the doctors won 11 awards out of 27 including a Mobile in Aluminum by Dr. Tace Nielson of New London.

The complete list of winners follows:

Professional:

Best in Show. "Still Life", Margaret Rosenthal.
Second: "Hillside", Dr. W. W. Wright.
Third: "Lisa", Diane Marinaro.
Honorable Mention: "Winter Majesty", Ruby Gilman.

Advanced Amateur:

First: "Spring Triumph", Lorraine Opinsky
Second: "Old Dam Site", Dr. R. M. Starr.
Third: "Trees", Stephen Rosenthal.

Water Color:

First: "Landscape", Dr. Tibor de Cholnoky.
Second: "Kings Point", Dr. Margaret McLean.

Drawings:

First: "Apple Tree", Dr. Tibor de Cholnoky.
Second: "Barnyard Scene", Dr. Herbert Thoms.
Third: "East Side, N. Y.", Polly Samuelson.

Beginners:

First: "Golf", Daniel P. Samson.
Second: "Rainy Night", Dr. E. E. Williams.
Third: "Triton, Rock Harbor", Dr. Joseph F. Burke.

Children:

First: "Pattern of Animals", Charlotte Anderson.
Second: "Cocktails at Newfields", Candy Wheeler.
Third: "Potato Print", Laurence Harris.

Photography:

First: Stephen Rosenthal.
Second: "Textures", Karin Rosenthal.
Third: "Surfside", Dr. L. Verstandig.

Sculpture and Mobile:

First: "Cherubs", Mrs. Orvan W. Hess.
Second: Mrs. S. Rentch.
First: "Tranquility-Mobile", Dr. Tace Nielson.

Children's Sculpture:

First: "Frog", Barbara Anderson.
Honorable Mention: "Seal", Phoebe Nielsen.

As usual we had the perennial cry that the show should be only for the doctors. My own contention is that if the doctors alone exhibited, there would be such a small show that we could not fill the gallery. It has been suggested that on even years the show should be exclusively for the physicians and on odd years for the doctors and their families. It will be impossible to poll the entire profession but I should like to have expressions from those interested before we put the matter to committee vote.

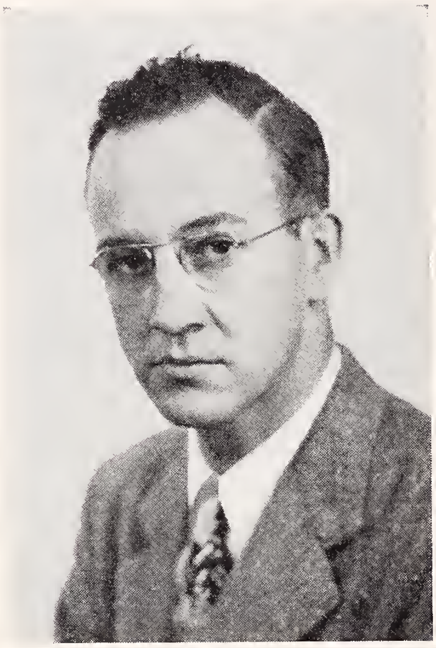
I have spoken with the members of the Women's Auxiliary on the above point. They will be disappointed not to be able to show every year but their attitude was that this was the physicians show and they will do whatever we desire.

John M. Freiheit, M.D.
President, Connecticut State
Physicians Art Association

OBITUARIES

Hugh Bernard O'Donnell, M.D.

1916 - 1961



Hugh Bernard O'Donnell, M.D., of Milford died March 11, 1961 at the age of 44 years. Death was atributed to a coronary occlusion. Dr. O'Donnell was born in Dover, Ohio, and was graduated from the University of Notre Dame in 1938.

While at Notre Dame he had been president of the Academy of Science. He received his M.D. degree from the College of Physicians and Surgeons of Columbia University in 1942. He served his internship in Grasslands Hospital, Valhalla, New York, in 1942 and 1943 and served as a lieutenant in the Medical Corps U.S. Naval Reserve from 1943-1946.

Upon his discharge from the Navy Dr. O'Donnell returned to Dover, Ohio, where he conducted a general practice for two years prior to beginning his residency in general surgery at St. Vincent's Hospital in Toledo, Ohio, from 1948-1951. He also served a final year of residency at Grasslands Hospital in 1951 and 1952. He established a surgical practice in Brooklyn, New York, from 1952 until 1955 at which time he began his practice of surgery in Milford, where he was an attending surgeon of the Staff of Milford Hospital.

Dr. O'Donnell was a diplomat of the American Board of Surgery, and held membership in the American College of Abdominal Surgeons, the Milford Medical Society, the New Haven County Medical Association, and the Connecticut State Medical Society.

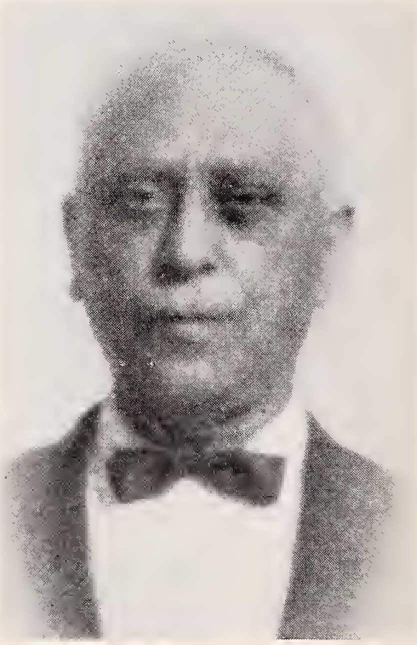
His personality was quiet, unassuming, kind, considerate and sympathetic, with an insatiable curiosity for knowledge of things general and scientific. His cogent evaluations of problems, spiced with a dry humor were classic in the scope of their understanding. His abrupt death was a shock to his colleagues, many friends, and devoted patients.

Surviving are his wife Betty Lucille Turner O'Donnell; two sons, Hugh B. Jr., and Kevin Michael; two daughters, Sharen and Kathleen, all of Milford; his father Hugh Bernard of Mansfield, Ohio; a brother, John, also of Mansfield, Ohio; and two sisters, Mrs. James F. Wible of Cleveland, and Mrs. Allan Gossett of Acron, Ohio.

James W. Tierney, m.d.

Harry A. Conte, M.D.

1889 - 1961



Harry Conte, M.D., died at his home in New Haven on April 17, 1961. Dr. Conte was born in New Haven on August 3, 1889, and received his education in the schools of New Haven and Yale University. He received his medical education in Long Island Medical College and served his internship at St. Barnabas Hospital, Newark, New Jersey.

During World War I he served in the base hospital in Mars-Sur-Allier, France after which he returned to New Haven and general practice, specializing in obstetrics until his death.

He was a member of the staff of Grace-New Haven Community Hospital and the Hospital of St. Raphael.

Dr. Conte was a member of the New Haven Board of Education for twenty-seven years.

In recognition of his contributions to the community life of New Haven, Dr. Conte received many honors. In 1953 he received the Ancient Order of Hibernians Friendship Award "in recognition of unstinted sacrifices for the medical comforts and spiritual consolation of your fellow citizens but above all for the noble motives that inspired these acts of generosity both in and out of your profession." In the same year, he received the certificate of "member benemeritus" of the Grand Lodge of the Sons of Italy of Connecticut and also a plaque as a founder and charter member of the Alpha Club. Last October he was honored by the St. Andrew Society at its 60th anniversary celebration and only two weeks before his death he received the Veritas Award from the New Haven Providence College Club.

He was a past president of the New Haven Medical Association; president of the New Haven Obstetrics and Gynecology Society; a member of the Connecticut State Medical Society; a director of the New Haven Tuberculosis Relief Association and the Farnham Neighborhood House.

In honor of his long services and contributions to the development of education in New Haven a new $3,000,000 school now in process of construction will carry his name.

In January of this year, the New Haven Register singled out Dr. Conte to be saluted in that month for his community services.

The editorial in the April 19th issue of the *New Haven Journal Courier* expresses well the feelings of those who were privileged to know him. "Dr. Conte whose death occurred this week at the age of 71, was no remote symbol of devotion to civic duty and services well done, but a warm enthusiastic kindly personality, a good physician in the truest sense, and a distinguished citizen who loved his community and labored for the benefit and welfare of its people . . . And the city as a whole is in his debt for the wise counsel and advice on which it leaned heavily during the twenty-seven years he served as a member of the Board of Education."

Medicine in Connecticut can be proud of Dr. Conte. He leaves two sons Dr. Harry C. Conte and Dr. Bernard L. Conte in medicine to carry on his honored name.

Denis S. O'Connor, M.D.

In Memoriam

Lampson, R. Starr—Hartford; Harvard Medical School, 1934; practiced surgery in Hartford since 1937 as visiting surgeon at Hartford Hospital and specialized in chest surgery; graduated from Amherst in 1930, interned at Massachusetts General Hospital, and pursued his surgical residency at Pondville Hospital; he served in the U.S. Navy during World War II, 1942-46, and was advanced to the rank of lieutenant commander; Dr. Lampson was consulting surgeon for the Charlotte Hungerford Hospital, Torrington; Veterans Hospital in Rocky Hill; Cedarcrest Sanitarium, Newington; and the Johnson Memorial Hospital, Stafford Springs; he was a founder of the American Board of Thoracic Surgery, a diplomate of the American Board of Surgery, and fellow of the American College of Surgeons; died in his sleep in a Philadelphia hotel, where he was attending a medical convention, aged 53 years.

A.M.A. Helps Industry Set Up Disaster Plans

A guide to aid medical departments of the nation's industries in developing a disaster plan that will work at maximum efficiency in any emergency has been prepared by the American Medical Association's Council on Occupational Health.

Lee N. Hames, Chicago, secretary of the council's Committee on Industrial Health Emergencies, said the guide is primarily a questionnaire for evaluating a company's readiness to cope with the medical problems associated with any industrial disaster.

"Information gathered in answering the questionnaire," he said, "along with information in the guide itself, will help the directors of medical departments in industries to correct inadequacies in existing plans as well as to stimulate development of new plans."

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

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Annual Reports

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1960 - 1961

The following reports presented to the House of Delegates appear as edited. All reports as originally submitted are on file in the General Manager's Office

REPORT OF THE PRESIDENT

It has been a great honor to serve during the past year as the 123rd President of the Connecticut State Medical Society. As I step down from that office I ask you to bear with me while I reminisce a bit, not so much of the past year, but of the twenty-five years that I have been a member of this Society.

Twenty-five years is not a long time in the life of this 169 year old Society. But the medical world and the State Medical Society were very different twenty-five years ago.

Sulfonamides hadn't yet come into general use. Antibiotics hadn't entered the picture. Viral diseases had not yet been described. Electrocardiography was in the Model-T stage. Anesthesiology hadn't progressed far from its original practices. Psychiatry was largely Freudian or custodial; at least it was certainly not biochemically oriented. Blood transfusions were just emerging from the direct whole blood transfer methods. Pneumonia was moving from the largely watchful-waiting stage through the specific anti-sera phase. Cornea banks, bone banks, artery banks, and blood banks were virtually unknown.

It was twenty-five years ago, as you know, that the Connecticut State Medical Journal was first published. As Dr. Nahum put it in the January 1961 issue of Connecticut Medicine: "Until about the time our Journal was founded we were all virtually in a long period of therapeutic nihilism. . . . It is purely a coincidence that the founding of our Journal and the great era of scientific therapeutics occurred at about the same time. But how fortunate it was for our readers and their patients." For the nurturing of our Journal through its infancy and childhood and the development of it into full manhood, our Society will always be indebted to Dr. Stanley B. Weld, one of the most dedicated servants the Connecticut State Medical Society has ever had.

It was twenty-five years ago, also that the late beloved Dr. Creighton Barker began his service as the State Society's part-time Administrative Secretary. Soon this became a full-time assignment and during the next twenty years, through Dr. Barker's energetic devotion and wise guidance, the Society experienced greater growth and development than in any previous period of its history.

Twenty-five years ago, general practice was the most common type of practice in the state and its scope was often quite broad. The medical world had not yet become markedly hospital-centered. Very few people had hospital or surgical expense insurance. Connecticut Blue Cross was not yet born and it would be more than a dozen years before CMS would sell its first contract.

As I embarked on general practice twenty-five years ago, I had a special interest in traumatic surgery and I thought it good fortune to be able to "learn while I earned" by spending part of my time apprenticing under a chief of orthopedic surgery who had a large industrial surgical practice. This method of obtaining advanced training had been in vogue for generations. The influence of boards wasn't great in 1936. In fact the American Board of Orthopedic Surgery was only one year old. The American Board of Internal Medicine was formed that year; but the American Board of Surgery and six other boards, including the Board of Preventive Medicine which later certified me, hadn't even been organized by 1936. The constitution and bylaws of the Advisory Board for Medical Specialties had been adopted only two years prior to 1936.

The fields of medicine changed rapidly during the past twenty-five years and it has been an enjoyable and rewarding experience to change with them. It may seem a far cry from general practice and industrial surgery to board certification in preventive medicine but the metamorphosis was quite gradual and I belive that, to a large degree, I have simply remained in equilibrium with the changing environment of the community in which I have practiced.

Working in the occupational medicine and public health fields provides an excellent opportunity to develop a perspective of certain phases of economics and, with your indulgence, I should like to devote the remainder of my reminiscences to an aspect of economics.

About twenty-five years ago, in the 1930s, the White House was occupied by a man who appeared to the vast majority of Americans, then suffering from a severe economic crisis, to be nothing less than a savior. Brimming with charm and confidence, he led the way into what was to become the most mammoth economic transformation our country ever experienced. With what seemed at the time to be a breathtaking abruptness, decrees and regulations began pouring out of Washington in a vast, expanding stream. Organized labor suddenly found itself catapulted from a posture of struggling underdog to that of king of the hill by a rapid chain of new federal orders, regulations and laws. The farmers were favored with a rapidly expanding program of grants and loans, price supports, tax exclusions, a swarm of consultants and advisors, and a variety of special benefits.

Meanwhile, business and industry were clobbered by an equally rapid burst of new regulations and laws which toppled them from their former relatively favored position. Business and industry found themselves forced into the collective bargaining arena under rules which they felt so gagged and hamstrung them as to render them almost defenseless.

The shackling of business and industry and the aggrandizement of agriculture and organized labor were euphemistically called "essential steps to bring about a long overdue balance of interests," the implication being that the lack of such balance had caused the economic crisis and the achieving of the new balance would help the country to get over the crisis.

Governmental intervention in some other areas was frankly called pump-priming. These areas included forest and park redevelopment, development of other natural resources, highway improvements, urban redevelopment, educational and training programs, housing assistance and special financial incentives among a host of others into which federal money was poured — always, of course, with a rich mixture of governmental regulation and control.

To pay for all this, money standards were juggled and a popular "soak the rich" graduated taxation system was set in motion. Peoples' incomes in numbers of dollars grew; but the costs of goods and services also grew. Furthermore, as governmental subsidization grew larger and larger, tax exemptions were lowered and the graduated tax rates were sent into a steeper climb. To ease the pain, pay-as-you-go taxation methods and hidden taxes were repeatedly injected into the more sensitive areas. Redistribution of wealth through taxation was soon in full swing.

The social security assessment system was launched twenty-five years ago as a means by which the older folks who couldn't find work would receive allowances out of a pool made up of assessments against the incomes of those actively working. To ease the pain for the active workers, their employers were assessed similar amounts. This system was designed to provide the unemployed older folks with money at regular intervals to purchase food, shelter, clothing, medical care and other necessities of life. To assuage any moral scruples the older folks might have about receiving money from a compulsory assessment on active workers, the whole scheme was neatly presented as an insurance program rather than one in which the government acted as a transfer agent of the money involved.

It must be remembered that there was an economic crisis, the Great Depression of the 1930's and the mammoth economic transformation started by the Rooseveltian New Deal was accepted at that time as a justifiable heroic attempt to overcome economic destitution and despair. If some were shocked by the apparent disregard for traditions, long-accepted beliefs and standards, the urgency of the situation soothed the consciences of the majority. It is safe to say, however, that very few realized where this politico-economic transformation would take them or how mammoth it would become.

In 1933, the New Deal moved federal spending up $2 billion from a $5 billion base. Each year federal spending grew larger and larger and yet the economic crisis, the Depression, had not been overcome when World War II began. In war or in peace, in good times or in bad over the entire period, bigger and bigger doses of federal spending have been administered to cure our economic ills, real or imaginary. The size of the dose of federal spending shot past the $60 billion per year mark about 5 years ago; and soon $70 billion and then $80 billion became our annual dose. These are mammoth proportions that almost no one would have thought posible twenty-five years ago. Yet no one today seems to know just when "Big Brother" is going to stop growing or when those responsible for the health of our economy will realize that, if bigger and bigger doses of federal spending don't bring about economic health, it might be wise to change the method of treatment.

Old Karl Marx thought you had to use bullets to achieve government ownership of productive resources whereby to bring about an equalization of income and to provide welfare services for the less privileged. His counterparts of the last quarter century, however, have been using ballots to confiscate the rewards of private enterprise and to purchase goods and services with such confiscated incomes to provide various services, welfare and otherwise.

Federal funds for highway construction have been made available to the states while the states have been diverting highway taxes into other uses. Federal funds for schools, municipal development, agricultural resources, veterans' services and benefits, and many other programs have become commonplace today. Hand in hand with its development as the "Big Brother" purchasing agent of more and more goods and services for larger and larger segments of the population, the federal government has also become the "Big Brother" who imposes more and more controls: who tells us what we should want, what we're going to get and how we're going to get it.

I have described the social security assessment system as one in which the federal government during the past twenty-five years has been acting as a transfer agent of funds rather than as a purchasing agent. It is true that the government has all along set the rules, determined the assessment rates and decreed the means tests — means tests in the sense that anyone whose income from work has exceeded certain amounts has been assigned reduced benefits or has been denied benefits. But the government by and large has not insisted on telling the recipients what to do with the regular allowances of money they have received.

All through the years, however, there has been pressure to make amendments to the system whereby the government would become the purchasing agent of health services for social security beneficiaries. Now, under a variety of thin disguises and an avalanche of perverted catchwords and slogans, this pressure has become so overwhelming that even the staunchest opponents of the welfare state have been maneuvered into countering with proposals which themselves would concede certain purchasing agency rights to the government. Some of these concessions would give the government the right to directly purchase health services instead of permitting the government to act as a transfer agent for funds with which the beneficiaries would have the option of purchasing voluntary health insurance.

Yes, the urge on the part of many people wittingly or unwittingly to permit governmental confiscation of a greater and greater portion of the rewards of their productivity so that the government can be their "Big Brother" purchasing agent in more and more fields. This urge has changed in the past twenty-five years only in becoming more widely acceptable. The unwitting ones are fighting like the very devil to go "only part way."

This is a sad state of affairs. The American medical profession currently is foremost in the development and application of improvements in preventive, constructive and curative medical knowledge. It has become a medical mecca eagerly sought by physicians all over the world. But on the politico-economic front it has been artless, needlessly appeasing, and at times downright stupid. It frequently has broken into splinter groups fighting about technicalities and contract details promulgated by health insurance carriers, non-profit or commercial, fighting bitterly over matters which fade into insignificance when compared with the threat of government to set up compulsory assessment systems in which the government, as the purchasing agent for direct health services, could destroy the voluntary health insurance program that has been so successfully developed during the last generation.

You may ask me if our Society has not done its job in developing and approving broader CMS plans during this past year. It was a good step forward and I am pleased to have had a part to play in accomplishing that step. But there is more to be done. We now have the threat of open warfare between non-profit voluntary health insurance plans and commercial insurance programs. For ten long years, 1939 through 1948, the Society wavered between non-profit carrier plans and commercial carrier plans and between conjoined and competitive combinations of plans.

Reminiscing from today's vantage point and peering into the politico-economic caldron in which we may possibly get dunked, I firmly believe that the medical profession must not only strive hard for a healthy rapprochement between the Blue Plans and commercial health insurance carriers but also must join their hands and ours into a strong triumvirate which can lead our people away from the dangers inherent in permitting the government to be a bigger and bigger "Big Brother" purchasing agent.

If we cannot face up to this task, then patients — the public — will lose their personalized system of medical care as their physicians become reduced to carrying out the decrees of bureaucrats. The government will grind out enough physicians to keep the number adequate; but the quality won't be there and the traditional devotion to duty won't be there. This has been demonstrated in England and elsewhere.

In closing, I thank you for permitting me to carry on this bit of reminiscing. I have concentrated on a phase of our national politico-economic picture because I believe that too commonly there is a tendency on the part of a large segment of the medical profession to ignore national politico-economic trends until there are signs of specific effects on the economics of medical care. Then there is a belated frantic attempt to stop the onrushing flood with hastily constructed dikes that are not only too little and too late but, instead of being designed to divert the flooding waters to protect our whole economy, merely attempt to create a little dry island for medical practice per se, allowing all the rest of our private enterprise system to drown.

The economics of medical care cannot endure on its own little island isolated from the general economic pattern. Physicians must study the entire picture, must develop clear perspectives, and must enter into active partnership with like-minded people of various vocational fields in a concerted effort to curtail governmental meddling and to build a stronger private enterprise system on the foundation of personal freedom and individual initiative that is the rightful heritage of all who escaped governmental oppression and came to this land of great hope.

For your patience in hearing me out, for your stimulation and help during the year I have served as your president, and for the opportunity of serving in various society offices over the course of several years, I am deeply grateful.

John N. Gallivan.

REPORT OF THE GENERAL MANAGER

In recent years, we have all been operating in an atmosphere heavily laden with concern for what is popularly called "the public good" or "the public interest." It is only natural, of course, that every thinking person would wish to share in this concern, and be willing to do what he can to promote those things which are beneficial to all. But it is becoming increasingly evident that there are some among us who do not believe that what is in the public interest should any longer be determined by the public.

As a consequence, we now have dozens of modern-day crusaders — most of whom are highly politically oriented— moving rapidly from one end of the country to the other, unearthing multiple areas of alleged crisis and unmet needs among the people. Each is busy turning up things which must be done immediately for 180 million downtrodden Americans; each is hurrying back to Washington to report on the pressing problems he has discovered; each is hoping to be first in introducing a piece of corrective legislation which will mark him as a champion of the underdog.

Now, physicians have long been interested in the public good — particularly in the field of health — and have made so many valuable contributions to it, over a period of years, that nowhere in the world is better medical care to be found, or more people obtaining it, than right here in the United States. A record to be proud of, you may say — one which should certainly put Medicine high on the list of the many skills and sciences which have shown uniform concern for the well-being of our citizens; one which could conceivably merit a hearty pat on the back and perhaps some very modest acknowledgment of a job well done.

But in 1961, is the American medical profession receiving such recognition from an appreciative nation? It most definitely is not! On the contrary, it is being viciously attacked in all media of communication — being subjected to every sort of ridicule and embarrassment — in a manner which I doubt has been equalled in all of history. Day in and day out, everyone from Dr. Brady to Secretary Ribicoff — from Bernard J. Schub to Walter Reuther — is characterizing this country's practising physicians as avaricious charlatans, who have had their chance to bring medicine to the people and have failed, and branding their representative organizations as willful betrayers of the public trust. A thousand literary hacks are today making a small fortune from throwing rocks at the "docs", and are turning out a veritable mountain of sensationalistic feature articles, contrived editorials and unfactual news items. I feel sure most of you have seen examples of these pieces, but, if by chance you have not, stop in at St. Ronan Street almost any day and look over our supply. We never run short!

Not only are the professionals assailing us, however; we also are developing critics among amateurs. Presuming you all to be familiar with the identity of Dr. Brady and Secretary

Ribicoff and Walter Reuther, I am surprised that no one has interrupted me to ask who Bernard J. Schub is. To tell you the truth, I don't know myself, but I have read his astute analysis of the nation's health situation in a recent letter he wrote to the editor of the New Haven Register (4/15/61). Mr. Schub sees the picture somewhat as follows: "The AMA and its most powerful lobby are carrying on a vigorous campaign against medical care for the aged through Social Security. This is based on cheap propaganda, rather than on facts." . . . "It is my opinion that only congressional investigation of the AMA and some of its members will discredit this . . . lobby." . . . "Twenty-two doctors in Brooklyn *alone* have pleaded the fifth amendment (in an insurance fraud investigation) . . . . Not to mention doctors who have been indicted for performing illegal operations and charging exorbitant fees."

Making no mention whatever of the Kerr-Mills legislation, which the AMA supports, Mr. Schub concludes: "I, for one, . . . favor the President's plan for Medical Care for the Aged, (and) I would . . . urge a congressional investigation of the AMA."

It is not very easy to follow Mr. Schub's *non sequitur* reasoning in his support for Social Security medicine. On this basis, he would probably also advocate the abolishment of unions because a number of labor leaders have "taken the fifth," and perhaps he would even go so far as to suggest that the Internal Revenue Service ought to be dismantled, on the grounds that an occasional local agent is charged with accepting a bribe. But whether we agree with this gentleman's premises and conclusions or not, I point out to you that he is identifying himself with a cause and has absolutely no reluctance about communicating his convictions to others. I cannot help but wonder how many of the 3300 members of our Society are doing as much to promote *their* cause.

Now, a very significant question ought to be asked here: Does Mr. Schub come up with these ideas by himself as he stands in front of his mirror, shaving, or is he being encouraged in this kind of thinking by others; by people who we might expect to be just a little less superficial in their analysis of the problems of the day? People like Secretary Ribicoff, for example, who has been telling him that the American Medical Association is misleading the country in labelling President Kennedy's old age health plan "socialized medicine." Only last Friday, in fact, Mr. Ribicoff took pains to repeat this statement and told the American Society of Newspaper Editors that "the AMA is trying to make a hobgoblin out of a sound and constructive plan. . . ." He characterized the program as an insurance mechanism which would operate in much the same way as voluntary health insurance does now, only on a broader base, and he urged the editors to give American people "plain, unvarnished information about the administration's program for health insurance under the Social Security system." (New Haven Journal Courier — 4/22/61).

Would that all editors will do *just* that, as — oh, happy day. — some of them are doing already. Let's have lots of plain, unvarnished information about the whole scheme, not just what the AMA is saying about it. Let's headline the news with a report that both the Socialist and Communist Parties in this country are in complete agreement that Forand-type medicine *is* socialized, and are strongly supporting the administration's health proposal, as they eagerly look forward to the day when compulsion in medical care can be made available to everyone. These are indeed fine endorsements for the plan, and far more authentic judgments on it than the AMA could ever pass. Why don't we hear more about *them?*

And surely Mr. Ribicoff and Mr. Reuther and Mr. Humphrey all know the Supreme Court has ruled, time and again, that the Social Security system is *not* insurance in any sense; that there is nothing "earned" or "prepaid" about it. They know full well there would not be the slightest similarity between their old-age medical plan and voluntary health insurance. Now, what motivates these men to keep up this false pretense? Are the people not entitled to have *this* important point cleared up, before they petition the Congress to enact such legislation?

We have speculated that Mr. Schub, our Letter-to-the-Editor writer, perhaps gets his ideas from public figures like Mr. Ribicoff. Shouldn't we also know from whom the Secretary is probably obtaining *his* advice? How many delegates here today know who Wilbur J. Cohen is? How many know that he practically wrote the Social Security Act singlehanded, as well as most of the numerous amendments to it which have been made over the years? How many know that he is openly in favor of a universal compulsory national health service for America, and has been working diligently for its adoption by Congress for more than two decades? How many know that he has just been confirmed as Assistant Secretary of Health, Education and Welfare for legislation? And how many know that his confirmation for the post was voted on by only seven senators out of one hundred, and that the vote was only four to three in favor?

No matter how the AMA may argue — or the Connecticut State Medical Society, for that matter — it is not of far greater moment to the public than a man who holds the beliefs Mr. Cohen does should be so casually appointed to a sensitive position in our government? Should the people not know who it is that speculates with their freedom behind the scenes, while better known officials offer them bland reassurances and charge that others are misleading them on medical care and similar issues?

Each week — almost each day — we receive more and more detailed analyses of health legislation such as the King-Anderson proposals. We are urged repeatedly to communicate with our legislators and point out to them the glaring faults in these measures — the hidden dangers to free choice — the staggering cost — the inevitable controls which will result, if the bills are passed. We offer them 8 point critiques and 12 point critiques and even critiques of critiques, in an effort to convince them that they should not vote in support of Social Security medicine. But, sometimes I wonder if this is really the right approach. Actually, what reason have we to suppose that legislators don't already *know* why they should turn thumbs down on these measures? Don't *they* know who Wilbur J. Cohen is, and what his ultimate plans are for the expansion of Social Security? They should. He has certainly never made any bones about what he intends to do, once he gets the ball rolling, yet it is a sad fact that some ninety-three United States senators either didn't know or didn't care about his appointment as Assistant Secretary of HEW on March 23, 1961. This is indeed discouraging news for those of us who have high regard for the democratic process and high hopes for the preservation of individual freedom in America.

Unfortunately, not all our problems are to be found in Washington, D.C. We also have some on the home front. At the General Assembly and in the Connecticut press, recently, we have taken a few more lumps on our support for early implementation of the Kerr-Mills legislation and on our relationship with CMS. For those of us who have taken an active part in our state legislative program — who believe that the Society's positions in these matters are sound, and right and *in* the public interest — it has been a distressing experience to be forced to sit quietly by whilst labor people and government representatives publicly tear into the medical profession for its performance, its motives and its objectives — most all of which they find to be bad and false and *against* the public interest.

As members of a calling which demands of each practitioner that he possess a broad knowledge of the medical sciences before he is permitted to treat his first patient, it is difficult for us to understand how so many others can speak and write about us and our work with such insufferable confidence that their words are both meaningful and authoritative. We, in our knowledge, tend to speak softly and to avoid the sensational; they, in their ignorance, are not bound by such restraints.

Now there is no hope at all that the Reuthers and the Cohens and the Cruikshanks will ever change. They will unquestionably continue to give lip service in support of voluntary health insurance while, at the same time, make such outrageous demands on those who write it as to assure its ultimate failure. At that time — perhaps not too long from now, if they succeed — they will shake their heads sadly and shed salty crocodile tears for the private practice of medicine as it passes into the oblivion of national health service, just as they had planned it should.

But for those who are not so motivated — who only seek to develop facts and inform the public regarding these things — perhaps there is still hope of getting our message across. It would seem only logical that these people — the writers, the editors, the Mr. Schub's and other public opinion leaders — might welcome more information about medical care from those who provide it, or at least as much as they are getting from other sources.

I think Jim Burch will agree with me that our number one public relations objective today is *not* "publicity," as some seem to think it should be, but "communications." He has promised to set up in the lobby an exhibit on the "Circle of Patient Care," and I would urge all of you to spend a few moments studying it and to take along one of the accompanying booklets on "The Connecticut Medical Community" to read at your convenience. The basic principle of this concept is to tell Medicine's story at the grass roots level — to patients, to local service groups, to newspaper people and to others who participate in local community life. This, after all, is where most public opinion is formed and if individual physicians, who live and practice there, will bother to explain to their fellow citizens what modern medical care is and what *they have right now* available to them in their own town or city, it is extremely doubtful that they will ever be taken in by demagogues who are trying to sell them the joys of collectivism under a national health service.

If this concept is implemented — and we sincerely hope it will be — much less time will have to be spent analyzing new socialistic health proposals, and much less effort put into replying to ridiculous charges such as Mr. Ribicoff, Mr. Reuther and others are making almost every other day.

Our membership is our strength and it is also our weakness. Our policies are supported by most Connecticut physicians, but the difficult job of making them effective is all too often left to a chosen few. We are fortunate in having some fine, dedicated, competent men representing us and our State Medical Society right now, and I know they will continue to work diligently on our behalf. But they will need help, and lots of it, if Medicine's authentic story is to be told. Let's take a lesson from people like Mr. Schub, and write a letter to *our* local editor. Better yet, let's go and talk with him personally, work together with him to better inform the public on the health issues of the day, and then let the public decide what it wants. If we do this, I feel confident we need not be afraid of what that decision will be.

William R. Richards,
General Manager.

REPORT OF THE CHAIRMAN OF THE COUNCIL

The months since the semi-annual meeting of this body in December 1960, have been filled with many events and questions of importance to this Society. Your Council has held seven meetings, including one marathon session of six hours and another meeting the following week even then to complete the agenda. The average attendance has been high, namely twenty-two, which attests once again to the wholehearted acceptance of their responsibilities by the members of the Council and their serious concern with these matters. Despite natural differences of opinion on many problems, the Chairman believes he can sincerely state that most of these have been satisfactorily composed and that, as of now, the Society has arrived at an unanimity of purpose greater than has been present for many months.

To give a detailed report of all the actions of the Council would be tedious, boring, and time consuming, not to say unnecessary. The complete minutes of most of the meetings have been published in Connecticut Medicine, and I would like to assume that at least the members of this House have read them in order to keep informed about the business of the Society. It is hoped that this report can summarize in somewhat orderly fashion, those matters of most concern to all of us so that you can then act intelligently on the Agenda. you have before you.

CONNECTICUT MEDICAL SERVICE

As you well know, a great deal of time has been spent by the Council on matters concerning Connecticut Medical Service. The Council nominated for Directors for two-year terms: Israel E. Blodinger, New Haven; Cleveland R. Denton, Hartford; Frank H. D'Andrea, Stamford and William J. Murray, Jr., New London, all of whom were elected at the annual meeting in February. At a joint meeting of the Liaison Committees, Israel Blodinger and Francis Gallo were selected from the Board of Directors to serve on the Medical Advisory Committee, Dr. Gallo to succeed himself both as a member and as Vice-Chairman, and Allan J. Ryan was elected as Chairman of this Committee.

The Community Contract was first formally reviewed by the Council on January 4, 1961, and approved for transmittal to the Committee on Third Party Payments and to the County Associations for their consideration. On March 9, 1961, reports were received from all the County Associations and from the Third Party Payment Committee. On March 22, a joint meeting of the Liaison Committees was held to review and recommend action on all various suggestions and contingencies submitted with the reports. The majority of these were accepted by the Board of Directors of Connecticut Medical Service and, on March 28, 1961, the special meeting of this House approved the Community Contract without a dissenting vote. It is noteworthy to record that less than three months was required to process this contract through the nine steps set up by this House in April 1959.

There have been some other matters concerning the relationship between the Society and C.M.S. which have been of very serious concern to the Council. In my report to this House at the semi-annual meeting in December, I commented on the meeting between a special committee of the Council with the Insurance Commissioner and his staff. It has become more clear than ever that we did not convince them in any way that the physicians of the state contribute anything to the success of C.M.S. or that we should have any say in the construction of any contracts. A bill was introduced into the Legislature which, if passed, would have required three members of the Board of Directors to be elected by the subscribing members of Connecticut Medical Service. Even the Insurance Commissioner's office felt that this was impractical, but has been very insistent that either C.M.S. should amend its By-Laws in such a way as to reduce the physician representation to a distinct minority in order, as it was said, to remove the "stranglehold" that the Commissioner believes the physicians have over the policies of C.M.S.; or he would introduce a bill which would set up a Board of eighteen members, six to be appointed by the Connecticut State Medical Society, six to be elected by the lay Board of C.M.S., and six to be appointed by the Governor. As a result of that threat, a proposal was drawn up by the legal Counsel of C.M.S. of possible amendments to the By-Laws which would reduce the physician representation to 40% and remove from the Society, the exclusive right to nominate even these.

After prolonged consideration, the Council passed a set of resolutions which may be summarized as follows:

1. That the Connecticut State Medical Society reaffirm its belief that C.M.S. operates effectively in the public interest.
2. That the Connecticut State Medical Society stand firm against any legislation or changes of By-laws which would in any way change the present composition of the Board of Directors of the method by which they are selected.
3. That the Board of Directors of C.M.S. be strongly urged to stand firm against all such proposals because any change in these matters might result in the Society having to withdraw its sponsorship.
4. That the Connecticut State Medical Society would continue to support C.M.S. as a non-profit medical service corporation, including the continuation of the service benefit levels and the pro-rata payment guarantee if Connecticut Medical Service should lose its tax-exempt status because of refusal to comply with the demands of the Insurance Commissioner.

I am happy to report that, up to now, both the Society and C.M.S. have stood firm against these proposed changes.

You have before you in the Agenda, a somewhat lengthy resolution which proposes that the House rescind Resolution Number 5 adopted January 27, 1960. I urge you to read this Resolution, and the reasons for it, very carefully so that you will fully understand why the Council recommends its adoption.

At the meeting of the House of Delegates in April 1960 and again in December 1960, the matter of radiological fees on compensation cases came up for considerable discussion. Despite a number of communications from the office of the General Manager, the only reply from the Compensation Commission is that they have decided to take no further action in this matter. As a result, the Council has suggested to Dr. Lopatin of Bridgeport, who has petitioned the Council on several occasions in regard to this matter, that he ask for a hearing with his local Compensation Commissioner on a specific contested payment and that, if the Commissioner rules that he is empowered to determine fees for an item of x-ray service which differs as between specialist and non-specialist, the Council will authorize Dr. Lopatin to consult the Society's legal Counsel for the purpose of determining his legal rights in this regard.

You will see from the report of the delegates to the Council of the New England State Medical Societies that it was voted to have that Counicl take over the running of the New England Postgraduate Assembly if the respective six state medical societies approved such action. The Council of C.S.M.S. has voted *not* to participate in its operation this year.

Dr. Feeney, who was apopinted Chairman of the Governor's committee to implement the Kerr-Mills bill, has kept the Council informed of the progress in this matter, and the Council endorsed a set of principles which were published in Connecticut Medicine in February 1961, which it was hoped could be used as the guide in drawing up any proposed legislation for this purpose.

At the February meeting of the Council, Dr. A. N. Jorgensen of the University of Connecticut reviewed the course of events leading up to this year's legislative activity with regard to the establishment of a new Medical-Dental School in the state. He requested that the Society continue to give its support to this project and stated that he hoped the Society would be willing to advise and assist in the planning and operational phases of this undertaking.

The final report of the Opinion Survey Committee has been received and the copies are to be maintained at the State Office for reference. The Opinion Survey Committee is to compile suitable summaries for publication in Connecticut Medicine.

One of the most important items on your Agenda for today is the proposed complete revision of the By-Laws. A sub-committee of the Council worked long and hard on these and is to be commended for presenting such a thorough revision for your consideration. These By-Laws were presented to the Council in February, and some amendments were made at that meeting. I fell that it is quite proper that this House should know what the original provisions were so that you may decide whether the original provisions or these amendments are to be preferred.

They centered on two main topics as found in Articles 6 and 7. In the original proposal the Committee recommended that the President should, in fact, preside at the meetings of the Council. In the amendment, this was eliminated, and provision was made that the Chairman of the Council shall be elected by the Council from among its members. The Committee originally proposed that, in addition to the elected officers, the Council should consist of 1 councilor and 1 associate councilor from each component association, and 4 councilors-at-large elected from the House of Delegates. The amendment adopted by the Council provides for 1 councilor and 1 associate councilor from each component association, and an additional associate councilor from each component association with a membership of over 750 members, and 1 councillor-at-large elected from the House of Delegates.

This summary of the actions of the Council, as well as the minutes of the Council as published in Connecticut Medicine, is respectfully submitted for your approval.

Ralph L. Gilman,
Chairman.

REPORT OF THE SECRETARY

As the first Secretary separate from the office of General Manager under the change voted by the 1960 annual meeting of the House of Delegates, it is my duty to give a report.

Lucius A. Stratton, President of M.I.T., commenting on advances of science in general, recently stated: "The world into which we were born is gone. W have little or no idea of the world into which our children may grow to maturity. It is this *rate* of *change*, even more than the change itself, that I see as the dominant fact of our time."

This phenomenal rate of change is none the less true of medicine-not only in scientific advances but also in its involvement in medico-economic and legislative movements.

New frontiers proposed by the present administration purporting an alteration of the practice of medicine must receive our concentrated attention. Thoughtful servants of mankind will acknowledge the value of government assistance in areas of health, education and welfare. They will also be concerned with the extent of community and federal subsidies required by exacting demands for provision of high quality medical care.

Federal subsidies for hospital construction and maintenance, for our medical schools, for research, and for medicine now amount to more than 3 billion dollars. While this financial support for the accoutrements of medicine is not the direct responsibility of the profession, it might be asked how long Congress will continue to include adequate appropriations for these purposes in the national budget? Our hospitals, it is said, are in jeopardy. It is paradoxical that although filled to over-flowing they are financially in the red. Unless local municipalities will assume their full measure of responsibility and the public will take advantage of current Blue Shield plans, our hospitals, and para-medical services, with present standards, cannot survive. These costs are in the range of 30 billion dollars, is it possible, with all its generosity, that the federal government is capable of assuming the costs of this multi-billion dollar industry?

The economic aspects of physicians services to the sick and injured are properly the direct concern of the profession. Is the aim of so-called liberals to institute a form of compulsory, tax-financed medicine truly in the public interest? Can they guarantee the high standards of medical care now available under a system of free-choice augmented by comprehensive voluntary health insurance plans?

There is an unwillingness of some legislators to recognize that the preservation of maximum flexibility to fit changing national needs, can be achieved by a balanced integration of the respective roles of government and our profession. This trend is a challange which must be faced squarely in the interest of the profession and in the interest of the public. We must find answers to our questions, redefine our goals and work together for the solution of these problems.

During the past year the activities of the State Medical Society have increased tremendously. Your President has met many challenges with vigor. He has forthrightly expressed his views on a variety of issues on the President's Page. His fine summary of the present status, which appeared in the April publication of Connecticut Medicine, merits thought.

Critical developments in medical affairs requiring cogent action placed an expanding burden on your General Manager. He has relentlessly dedicated his energy to the communication of pertinent information not only within our ranks but to paramedical groups and the public. I would particularly like to call attention to his efforts in the conduct of the Relative Value Study, the Opinion Survey and development with James Burch of a Concept of Comprehensive Community Medical Care.

The Council has been confronted with a large volume of material which has necessitated long and special meetings. In all matters offered for decision at the State level, the viewpoint of each County Association, as presented by the respective Councillors, has received attentive consideration. Unity of action has been achieved in many complex problems of which the CMS Community Contract is an outstanding example.

That the responsibilities of the numerous Committees of the Society have been compounded is evidenced by the lengthy reports accompanying the agenda of this meeting. The Feeney Committee on Care of the Aged and Implementation of the Kerr-Mills Bill; the Legislative Committee in its support of bills on Humane Animal Research, Professional Confidential Immunity and other measures before the Legislature; the Third Party Payment Committee and Hospital Committee have been particularly active. Coordination of committees with overlapping interests seems desirable.

The total membership of the Society as of December 31, 1960 was 3315 with a net gain of 54 for the year. More than ever the support of every member, alert to the challenges of our times and actively participating in their solution, is needed. This is equally true of the County Associations. Following the lead of Hartford County, implementation of an orientation course for new members, is in progress in New Haven County.

Many of the members of this society have accepted duties of national and international significance. They have served on important Committees of the American Medical Association and participated in various President's Conferences.

The State Medical Society has a continuing interest in Medical education. Under direction of the Committee on Post-Graduate Education, the Clinical Congress presented an excellent program in Hartford. In cooperation with the Medical School, plans are in progress for a meeting of the Clinical Congress in the new auditorium at Yale this Fall. The facilities of the Yale Medical Library, having the finest collection of medical books in the world and some 1600 periodicals, have been made available for the use of any member of this Society without charge.

This year was marked by the celebration of the Sesqui-Centennial Anniversary of the founding of Yale School of Medicine. Our President, Dr. John Gallivan, delivered an admirable review of the important role played by the Medical Society at the inception of this truly great school. For his active participation in organizing this signal event and for his other contributions to medical affairs, Dr. Herbert Thoms was honored with an award by Yale University.

Anticipating a future need for more physicians, plans have been launched to establish a second medical school in Connecticut, have received the support of the Connecticut State Medical Society.

Time does not permit a resumé of the many published and unpublished achievements of individual members in numerous fields of medicine and surgery. Notable contributions have been made to the understanding and treatment of heart disease, poliomyelitis, cancer, dermatology, endocrinology and pulmonary surgery. In Connecticut during 1960, the infant mortality rate reached a new low, perhaps the lowest in the nation.

These facts clearly indicate that Connecticut physicians are leaders in an era of rapid medical progress and are dedicated to the preservation of the best quality of medical care for its citizens.

Orvan W. Hess.

REPORT OF THE MANAGING EDITOR OF CONNECTICUT MEDICINE

It is my privilege to bring to you a report on the conduct of your scientific publication, *Connecticut Medicine*, for the past year.

From the viewpoint of quality of material and attractiveness of format, we believe that *Connecticut Medicine* has had a successful year.

Informational material on the activities of the Society, especially the Council Meetings, as well as many original articles or reprints on socio-economic subjects, offers the members of the Society ample means of being conversant with what goes on within the Society and the problems which face medicine from without.

August of this year will mark the twenty-fifth anniversary of the birth of what was known until recently as the *Connecticut State Medical Journal*. The high quality of the Journal is due largely to the high standard established by the Managing Editor for twenty-two years, Dr. Stanley B. Weld.

While *Connecticut Medicine* has been an adequate means of communication between the central office and the membership in the past, the problems facing organized medicine today and which may be expected to be more urgent in the future, require additional and more flexible media to match the swift pace of developments.

For that reason, you will note in the proposed by-laws that the management of the Journal will be one of the duties of the General Manager and the Editor will be concerned with the literary material.

A Publishing Committee, elected by the House of Delegates, will advise the General Manager on the technical problems of publication of *Connecticut Medicine* and will be responsible for recommending such other publication as seems necessary to furnish communication between the central office and members and between the Society and the public.

It is the opinion of your Managing Editor that these changes in the by-laws are necessary to meet the problems in communication posed by the present day conditions.

Financially, *Connecticut Medicine* was not as successful as in the year previous. This was due to a decrease in advertising revenue. Some of our large pharmaceutical firms have reduced their advertising budgets as a result of the criticism brought out in the so-called Kefauver Committee Hearings and the increase in free medical newspapers and magazines with nation wide distribution, which has taken away some advertising because of a wider field of distribution. It would not be surprising if this situation gets worse before it gets better but, having anticipated this decrease in revenue, we have tried to bring our costs into line.

Unfortunately, our paper and printing costs have increased during the year and our investigation shows that we have little hope of reducing those costs under the present arrangement.

Three meetings of the Editorial Board were held with excellent attendance and very helpful discussions by the members.

Mrs. Vivian C. Feriola, with her assistant, Miss Carney, has conducted the many details of the office so efficiently that few problems have arisen. When one considers the importance of the accurate handling of the many details of each issue, the absence of problems is a tribute to Mrs. Feriola.

We are fortunate to have a Literary Editor, in Dr. Nahum, who has such a wide acquaintance with outstanding teachers and writers that he has been able to get material of the highest quality for *Connecticut Medicine*.

It has been gratifying to the Editorial Board to find that *Connecticut Medicine* is being read by more and more of our members and while we have received many comments of approbation, we welcome constructive adverse criticism.

Respectfully submitted,
Denis S. O'Connor

REPORT OF THE EDITORIAL BOARD OF THE JOURNAL

Connecticut Medicine has had an excellent year.

The Editorial Board has had three formal meetings during our past year, and the Chairman has had many informal conferences with various of its members and numerous well wishers of the Journal.

During 1961 the Editorial Board has undertaken to issue one memorial number for Milton C. Winternitz, one honoring our great teacher and friend, George Blumer and many others that will properly celebrate our Twenty-fifth Anniversary. Studies are underway with the help of Dr. Ira Goldenberg to develop Grand Rounds and Clinical-Pathological Conference reports in our Journal and we have opened a Forum Page where readers may communicate their views on subjects in any area affecting the doctor. Needless to say, the Board would welcome communications for this page.

Our backlog of papers is increasing and their quality is, I think, very good. For this we are indebted to the keen editorial reading and critical suggestions for improvement by our board members and some non-official consultants. We have received almost universal praise from authors who have benefited from constructive editorial criticism.

The new format for the Silver Jubilee year was conceived by our able and devoted Manager, Dr. Denis O'Connor, who continues to improve the Journal by imaginative thinking and devoting much time and patience. He is forever conceiving new ways to make the Journal attractive, to make its operation efficient. He deserves the credit for making our Journal a model of excellence among state journals.

Mrs. Vivian Feriola and her associate Teresa Carney have worked diligently and with devotion in the office and have been of inestimable help to the Chairman. He wishes especially to commend to the Council their loyalty.

The Chairman has realized the importance of having an organization which can carry on when he is away or when he may be unable to function. Accordingly, before he went abroad last summer, he arranged to have Dr. Roy Barnett carry on the work. This association worked so well that the Chairman feels confident that the work of the Literary Editor will be competently covered at any time that he is unavailable. I personally, and the whole organization, are indebted to him for all the time he has given to making the work of the Literary Editor a continuous and uninterrupted process.

Respectfully submitted,
Louis H. Nahum

REPORT OF THE COMMITTEE ON POSTGRADUATE EDUCATION

This committee was responsible for planning two postgraduate educational conferences held during the past year, the 35th Connecticut Clinical Congress and a symposium on Medical Education in the Community Hospital.

The 35th Connecticut Clinical Congress was held at the Statler Hotel in Hartford on September 28, 1960. Total registration was 240. It should be noted that this is the smallest attendance at any Clinical Congress in the past ten years. In spite of this relatively poor attendance, the committee believes that the Clinical Congress continues to be a desirable postgraduate program for the doctors of Connecticut and unanimously recommended that a Clinical Congress be held in 1961. It was further recommended that an invitation by the Yale School of Medicine to hold the 1961 Clinical Congress in the new Mary S. Harkness Memorial Auditorium be accepted. These recommendations were approved by the Council at its meeting of December 15, and plans are underway for the 36th Connecticut Clinical Congress which will be held in New Haven in September 1961.

Medical Education in the Community Hospital, a symposium for directors of medical education, hospital administrators, and others interested in postgraduate education in the hospital, was held in New Haven on November 23, 1960. The program was arranged by this committee but was sponsored and financed jointly by the Connecticut Hospital Association, the Connecticut State Medical Society, and the Yale School of Medicine. Attendance numbered 113; 87 of those attending (47 physicians; 40 others) were from Connecticut, and 26 (19 physicians; 7 others) were from out of state. The program was well received and was followed by a lively discussion period. As a result of the experience with this second symposium and with the previous one held in January 1960, the committee is unanimously agreed that there is need for additional programs designed especially for physicians and hospital administrators who are concerned with the problems of postgraduate medical education in community hospitals. The committee plans to give this matter further consideration during the coming year.

In addition to arranging the two programs noted above, the committee considered a proposal for educational television for doctors throughout Connecticut. It was concluded that this committee should observe and attempt to evaluate the effectiveness of such programs before recommending support of educational television by the Society.

Respectfully submitted,
Arthur Ebbert, Jr.

REPORT OF THE COMMITTEE ON HOSPITALS

The Committee on Hospitals has assembled four times and in addition met jointly four times with the Council on Professional Practice of the Connecticut Hospital Association.

The committee received and considered the request of Dr. Nicholas D'Esopo, chairman of the Committee on Medical Education and Research of the Connecticut Trudeau Society for financing and co-sponsoring symposia for hospital staffs in Connecticut on the subject of "Allergies in Children." The committee recommended "that the Council grant such a privilege to the Connecticut Trudeau Society provided symposia are held under such financial co-sponsorship as to be satisfactory to each hospital concerned." The Council has acted favorably upon this recommendation.

The Hospital Committee was charged with the responsibility of drafting a plan for the development of a panel for review of Physician-Hospital Disagreements. The fundamental principles for development of the panel were based in the "Model Medical Staff By-laws, Rules and Regulations of the Joint Commission on Accreditation of Hospitals" which have been endorsed by the Connecticut State Medical Society and the Connecticut Hospital Association. Since the Connecticut Hospital Association did not care to participate in this panel, it was necessary to devise a unilateral panel.

The committee recommended that when such disagreements arise between the physician and the hospital, which resist resolution, a panel be appointed to assist in resolving such differences. The panel shall consist of three members of the Connecticut State Medical Society appointed by the President from a pool of fourteen members representatives from each of the County Medical Societies, chosen annually by the Council.

The members of the panel shall have had in no way any relationship to the parties involved and shall have necessary and desirable legal counsel by authorization of the Council of the Connecticut State Medical Society. This plan for panel development has been presented to the Council and adopted by the House of Delegates December 6, 1960. It is hoped that the panel will be rarely called for action and that if and when called, it will be successful in bringing amicable settlements of differences between physicians and hospitals.

The following two subjects were considered by the committee and jointly with the Connecticut Hospital Association's Council.

1. *Optimum Hospitalization Utilization.* In the face of the high cost of hospital care and the deficiency of hospital beds, the problem of how best could the hospital serve its community? The Pennsylvania Plan was reviewed in its many details relative to the formation of the numerous committees and their individual and co-related responsibilities for the best medical care. It was the opinion of the committee that a utilization committee would be a useful committee, but that it would necessitate a duplication of the many committees already in existence which are functioning satisfactorily.

2. *Hospital Emergency Department.* There is no doubt that the load of the emergency rooms is increasing, that staffing them is a problem and that they are an economic burden. Many patients are brought to the emergency room who either can not pay for their services or who for various reasons fail to do so. The committee suggested that two actions might be taken (1) to limit the types of cases to be treated in the hospital emergency room, (2) to publicly urge all physicians to care for such emergencies as seemed justifiable in their offices.

After detailed discussion at the joint session of the committees the following recommendations were made:

1) *Concerning Optimum Hospital Utilization.* The entire range of medical service within the institution should be examined for under-utilization, over-utilization and/or other areas of failure properly to meet the needs of the community.

Recommendation—Voted to recommend that the CHA Board of Trustees and the CSMS Council inform each general hospital together with its organized medical staff of their joint obligation and responsibility to work toward optimum utilization of the hospital in order to guarantee the quality performance which the community served demands.

2) *Hospital Emergency Department.* This subject matter was discussed individually and jointly by the two committees. It was agreed that the subject should be given a broader scope of thought and action than that suggested by the CSMS through its House of Delegates on April 26, 1960.

"Limit the types of cases to be treated in the hospital emergency room and publicly urge all physicians to care for such emergency cases as seem justifiable in their offices."

Recommendation—Voted to recommend that the CHA Board of Trustees and the CSMS Council urge each member general hospital to join with its organized medical staff in a formal examination of its emergency service function.

These recommendations have been endorsed by the Council of the Connecticut State Medical Society and it is hoped that the Connecticut Hospital Association will look favorably upon them and that full cooperation may be attained by the two organizations so as to promote the practice of good medicine for the best interests of the public.

The work of this committee is of the utmost importance and should be continued.

Respectfully submitted,
Clyde L. Deming

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

The committee has continued its activities in the field of Industrial Health. Meetings in the past year have been held more frequently than usual to coincide with the informal, informative, and educational meetings of the Connecticut Occupational Medical Group. Discussions at these meetings have covered varying phases of Occupational Medicine. One of the regularly scheduled committee meetings was held in a major industrial plant in Connecticut preceded by a plant tour of both the medical and industrial facilities. Additional activities in the past year have included review of state legislation related to occupational health with recommendations submitted to the Council. Dissemination of information on Environmental Health has also been a committee function. A proposal has been submitted for publication and distribution of "*Guiding Principles Relating to Occupational Medicine*"—a code prepared by this committee in the past and approved by the Council.

The chairman of the Committee on Industrial Health attended the 20th Annual Congress of Industrial Health in Charlotte, North Carolina, as a representative of the Connecticut State Medical Society. Activities of state industrial medical committees were discussed. A full report of our activities in Connecticut was submitted at the Congress.

Respectfully submitted,
J. Howard Johnston

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND LICENSURE

The Connecticut Medical Examining Board is the Society's Committee on Medical Education and Licensure. The official report of the Medical Examining Board for the year 1960 is herewith submitted.

In January, Governor Ribicoff reappointed John D. Booth, President of the Board, to serve another term of five years. Dr. Joseph A. Fiorito's name was also presented to the Council of the State Medical Society for nomination to the Committee on Medical Education and Licensure, to succeed himself, for the term commencing January 1, 1961.

Drs. Hastings and Resnik attended the meetings of the Federation of the State Medical Examining Boards and the Council on Medical Education and Hospitals held simultaneously in Chicago in February.

Three fully attended meetings of the Board were held during the year pursuant to the requirements of the Medical Practice Act. There were no instances requiring suspension or revocation of a license but one application for licensure on the basis of reciprocity with the National Board of Medical Examiners was denied because of acts considered by the Attorney General to be of a criminal nature.

Educational Permits have been issued for the first time to 117 individuals and in addition there have been 77 renewals. This is a decrease of 19 Educational Permits over 1959 which appears to have been the peak year.

The board continues to operate smoothly, in large measure due to the very efficient and valuable services of the administrative assistant, Mrs. Agnes B. Kennedy. This report contains no recommendations.

Respectfully submitted,
John D. Booth

(*To be Continued*)

CONNECTICUT MEDICINE

Connecticut State Medical Journal

Volume XXV JULY, 1961 Number 7

Laboratory Medicine Issue

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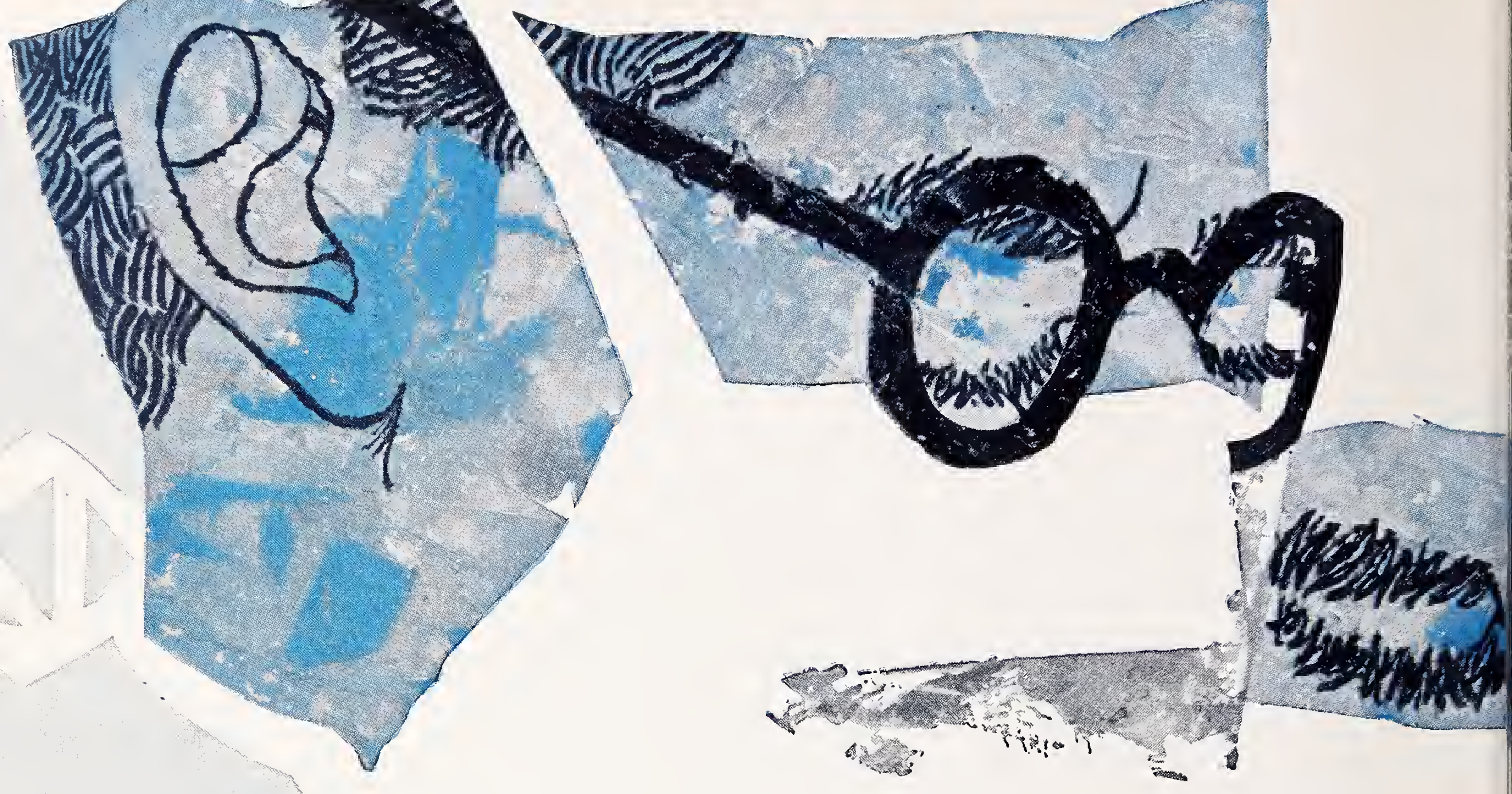

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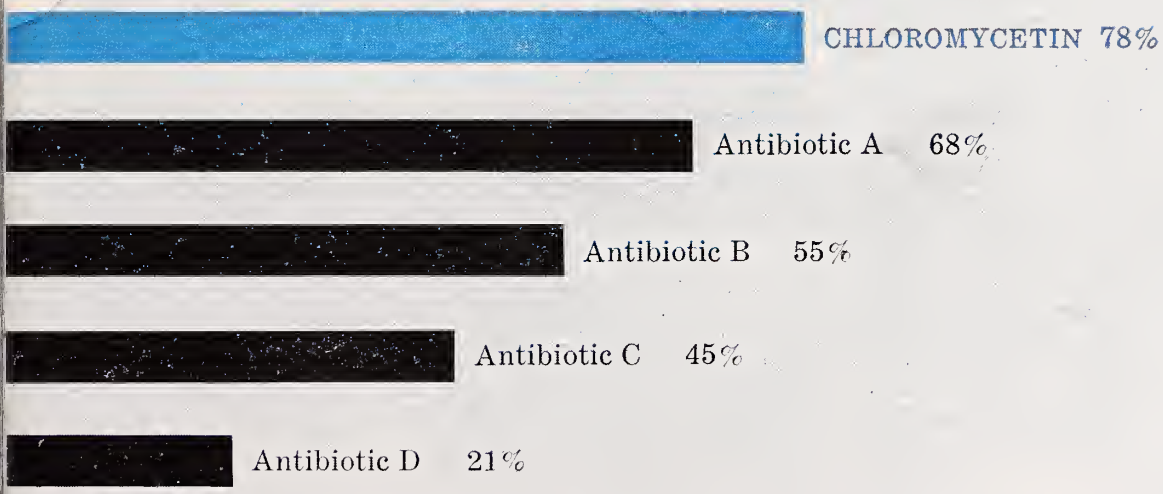
IN VITRO SENSITIVITY OF 250 STRAINS OF STAPHYLOCOCCI TO CHLOROMYCETIN AND TO FOUR OTHER ANTIBIOTICS*



*These strains of coagulase-positive staphylococci were isolated from hospitalized patients at a large county hospital during the year 1959. Sensitivity tests were done by the disc method.

Adapted from Bauer, Perry, & Kirby[1]

References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* **173**:475, 1960. (2) Fisher, M. W.: *Arch. Int. Med.* **105**:413, 1960. (3) Cohen, S.: *Circulation* **20**:96, 1959. (4) Edwards, T. S.: *Am. J. Ophth.* **48**, Part II:19, 1959. (5) Smith, I. M.: Staphylococcal Infections, Chicago, The Year Book Publishers, Inc., 1958, p. 148. (6) Petersdorf, R. G.; Rose, M. C.; Minchew, H. B.; Keene, W. R., & Bennett, I. L., Jr.: *Arch. Int. Med.* **105**:398, 1960. (7) Editorial: *J.A.M.A.* **173**:544, 1960. (8) Finland, M.; Jones, W. F., Jr., & Bennett, I. L., Jr.: *Arch. Int. Med.* **104**:365, 1959.

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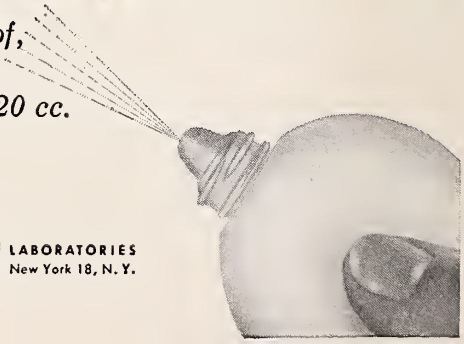

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Laboratory Medicine Issue

INTRODUCTION

It has been a singular pleasure to assemble the articles which make up the Laboratory Medicine number of our Silver Anniversary Issue.

The enormous strides in medical practice in these last 25 years have resulted from the application of basic knowledge to human disease. This basic knowledge concerns both the agents of disease and the host, man himself. Some of the knowledge is concerned with methodology, some with practical application, some with interpretation of data.

The pathologist in the modern medical community is in a particularly fortunate position to observe the increasing role of "basic sciences" in medicine. First, he supervises the clinical laboratories which provide the necessary useful information for the clinician. Second, he observes the tissue processes which provide the ultimate indicator of most diseases and the results of treatment.

It would be impossible in a single journal number to even list those aspects of Laboratory Medicine which are presently exciting. Instead we have selected certain subjects illustrating broad categories of current, practice.

The historical article by Dr. Gould, long-time editor of the *American Journal of Clinical Pathology,* gives perspective to the development of one of the fast-growing medical specialties. Three articles are especially concerned with methodology in areas which offer great hope for future expansion; virus diagnosis (Hsiung and Horstmann) fluorescent antibodies (Blundell) and automation of laboratory procedures (Seligson). In another new field, Dr. Bowers discusses interpretation of blood enzyme tests, many of them having unfamiliar and complex names.

In the three other articles the emphasis is on clinical use of laboratory data: Dr. Kendall reviews the vast growth of cytology: Dr. Vaughan discusses the laboratory control of erythroblastosis fetalis, an ailment completely mysterious 25 years ago: finally Dr. Freedman applies studies of kidney biopsy to further our understanding of the development of renal disease, indicating one of the pathways by which tissue pathology is avoiding the demise often prophesied for it!

We hope that these essays will lend perspective to the past and some insight into future trends, and that every reader will find something of interest here.

ROY N. BARNETT, M.D.
Guest Editor.

CLINICAL PATHOLOGY IN THE UNITED STATES

Its Development, Role, And Influence As A Medical Specialty

S. E. Gould, m.d., *Eloise, Michigan*

The epigram of Osler, "As is your pathology, so is your practice," may well have a corollary, to read: "As is your laboratory, so is your hospital."

ORIGIN OF CLINICAL PATHOLOGY

Clinical pathology, formerly called laboratory medicine, seems to have originated in Germany during the second half of the 19th century. During the 1880's, clinical laboratory methods in chemistry, hematology, and bacteriology were introduced from Germany into the United States, chiefly by internists, for the diagnosis of disease in living patients. Clinical pathology in 1900 was limited to relatively few simple procedures for the examination of urine, sputum, gastric secretions, feces, peripheral blood, cerebrospinal fluid, and effusions. As the scope and importance of diagnostic technics increased, hospital pathologists assumed progressively greater responsibility for the performance and the interpretation of results, and the clinical pathologist soon emerged as a medical consultant, at first in England and then in the United States. In the United States at present, most pathologists engage in the practice of both clinical pathology and anatomic pathology.

Clinical pathology in this country may be said to have had its official birth in St. Louis on May 22, 1922, with the founding of the American Society of Clinical Pathologists (ASCP) for the purpose of elevating the scientific, professional and educational standards of its members and of the specialty. In 1928, the Society established, in memory of its first secretary, the Ward Burdick Research Award for meritorious work rendered by a member. The scientific proceedings of the Society were published in the *Journal of Laboratory and Clinical Medicine* from 1924 until 1930, and in 1931 the organization founded the *American Journal of Clinical Pathology*. Since 1935 the Society has held an annual microscopic seminar in anatomic pathology. These exercises proved to be valuable and are now attended by almost 1500 pathologists and residents each year. The organization also maintains a Commission on Continuing Education with councils on anatomic pathology, clinical chemistry, cytopathology, forensic pathology, hematology, immunohematology, microbiology, miscellaneous topics, and radioisotopes.

The Author. *Professor of Pathology, Wayne State University College of Medicine, Detroit and Director of Pathology, Wayne County General Hospital, Eloise, Michigan.*

GROWTH OF CLINICAL PATHOLOGY

The growth of laboratory technics, as applied to the diagnosis, treatment and control of human disease, has been so rapid during the past 25 years that the clinical pathologist has veritably become a "man on the firing line," whether he be in hospital practice or in private office practice. Today the clinical laboratory is indispensable and, in fact, is one of the distinguishing features of modern medical practice.

Originally clinical pathologists performed the technical procedures in the laboratory with their own hands, but, owing to their expanding functions and the increasing scope of their activities, they later found it essential to enlist the services of specially trained associates and assistants. In order to provide suitable standards of training for technical assistants, the American Society of Clinical Pathologists (in 1928) established the Registry of Medical Technologists, a nonprofit organization operated by a Board that consists of members of the American Society of Clinical Pathologists and of the American Society of Medical Technologists, all of whom serve without pay. The Board sets standards for training, examines applicants for certification in general and special fields of medical technology, and establishes a code of ethics for medical technologists. It encourages affiliation of academic institutions with Approved Schools of Medical Technology, so that students with prescribed college credits, and certification as a Medical Technologist (ASCP), may be granted a Bachelor's or Master's degree from their academic institution.

Schools of medical technology were formerly approved by the Registry for training in medical technology. A significant step in the improvement of this program was taken by the ASCP in 1949 when it organized the Board of Schools of Medical Technology, and later enlisted the support of the Council on Medical Education and Hospitals of the AMA in developing plans "to approve, inspect and elevate the standards of training in medical technology." Ap-

From the Departments of Pathology, Wayne County General Hospital, Wayne State University College of Medicine, and University of Michigan Medical School.

proval is now granted by the Council on Medical Education and Hospitals, an official unit of the American Medical Association. As of June 30, 1960, there were 734 approved schools of medical technology in the United States, with a capacity of 5563 students and a total enrollment of 3944; in 1959, 2573 students were graduated. Beginning in 1962, three years of prescribed college work will be required for admission to an AMA-Approved School of Medical Technology for a period of training of at least 12 months. Students must pass the national examinations of the Board of Registry in order to become certified and earn the title M.T. (ASCP). As of December 31, 1960, the records indicated that 29,694 registered medical technologists were in good standing. The field of medical technology is growing phenomenally in numbers and importance, is rapidly gaining prestige and, with it, increasing economic remuneration for its members. Medical technology represents a highly satisfying and rewarding field of specialization for the exercise of one's talents in the service of the sick.

In recent years clinical pathologists have also increasingly availed themselves of the services of Ph.D.-trained specialists in biochemistry, hematology, and various fields of microbiology.

In 1936 the Directory of the American Medical Association included the names of only 852 full-time or part-time pathologists in the U.S.A. In that year, upon the joint recommendation of the Section on Pathology and Physiology of the American Medical Association and the American Society of Clinical Pathologists, the American Board of Pathology was established (1) to provide and maintain high standards of qualification for the practice of anatomic and clinical pathology, (2) to act as a qualifying body to certify competence in anatomic pathology and clinical pathology, and (3) to determine criteria for approval of institutions for training in these divisions of pathology. By 1953, 2491 pathologists were certified; and as of February 14, 1961 there were 3868 living diplomates of the American Board of Pathology. In 1960 (J.A.M.A., *174*:737-749, Oct. 8, 1960) there were 711 approved programs and 2638 residents in training in pathology in the United States. In 1959, of the 19 approved specialty boards, the American Board of Pathology granted more certificates than any other except the American Board of Internal Medicine and the American Board of Surgery.

Largely upon the encouragement of the ASCP, in 1947 the College of American Pathologists was founded, with the objectives of elevating standards of practice and of promoting education and research in pathology. This organization has been eminently successful in fulfilling its purposes, and it now exerts an important influence on the quality of practice of pathology in the United States. The ASCP and the College each has a present membership of more than 3,000.

At present there are three other national organizations of pathologists in the United States and most clinical pathologists are members of at least one of them. The American Association of Pathologists and Bacteriologists (membership, about 850), the International Academy of Pathology (membership, about 2,100), formerly known as the International Association of Medical Museums, and the American Society for Experimental Pathology (about 650 members) are all primarily devoted to anatomic pathology. It is interesting to note that clinical laboratory methods are being increasingly utilized in anatomic pathology, while research technical methods are constantly being adapted to routine diagnostic use in clinical pathology. The ASCP, the College and the International Academy of Pathology each has a comprehensive educational program for pathologists and for residents in training for pathology. At present the ASCP operates a laboratory in connection with its program of workshops and furnishes samples of reagents to pathologists for checking the results in their own laboratories, while the College utilizes consulting laboratories and conducts a reference laboratory for certification of standards and for surveys of accuracy in the laboratories of its members.

RELATION OF THE CLINICAL PATHOLOGIST TO OTHER PRACTITIONERS

Although the pathologist does not treat patients, he renders a high order of medical service by providing diagnoses, interpretations of results of tests, and professional consultations to physicians who attend the patient. He is also expected to participate in the hospital's program of medical education and research. By means of his various functions, the clinical pathologist has come to occupy a position of responsibility and trust.

During the past generation, the pathologist has come into closer relation with clinicians. The position of the pathologist as a practitioner of medicine has also been emphasized by the American Medical Association which has repeatedly affirmed the principle that the practice of pathology is the practice of medicine, and that services rendered by pathologists are medical service and not "hospital services." Clinicians will recognize that their patronage of lay-owned or lay-operated clinical laboratories is not in the best interest of their patients.

In the hospital, clinical pathologists are usually charged with many functions and responsibilities. In addition to their study of the necropsy and the diagnosis of surgically excised tissues (biopsies), they are often charged with such diverse duties as (1) participation in the work of the tumor board; (2) teaching, including conduct of the clinicopathologic conference; (3) direction of the laboratory and the school of medical technology; (4) training of medical technologists, internes and residents; (5) consultation to the medical staff; (6) research activities of the department; and (7) speaking and writing on various subjects pertaining to scientific medicine and medical practice. At present, the varied demands made upon the clinical pathologist's time are such that, generally, he can do justice to them all only if he devotes himself fully to but one general hospital having no more than 150 beds. If he has greater obligations, he should have the assistance of a proportionate number of associates.

Ideally, the pathologist should be frank, honest, tactful, and considerate. He should readily admit his errors and limitations, and should promptly check a technic, diagnosis, interpretation, or opinion, if any of these are questioned. Even in a relatively small hospital, hundreds of thousands of laboratory tests are performed annually, and errors are to be expected, both inside and outside of the laboratory. The clinician can render a service by calling possible errors to the attention of the pathologist. Most pathologists have adopted a program of quality control, in an effort to minimize the occurrence of errors in the collection of the specimens, the performance of the tests, and the reporting of the findings. Quality control starts with collection of the specimen from the patient, and does not end until all the events that are connected with the specimen and with the performance of the test, its reporting and interpretation, have been carefully checked.

The pathologist must accept his responsibility of leadership. Frequently, he is a key man in his hospital or institute, and as such, should be a good team worker. He must be ready to accept responsibility, anticipate problems that might arise, and seek prompt solution of those that are encountered. Like other physicians, the pathologist should be fascinated by his work. He should have enthusiasm, imagination, and the ability to "throw himself into his work." He should be an inspired student and teacher, and a dedicated practitioner.

RECENT MILESTONES IN CLINICAL PATHOLOGY

The growth of clinical pathology during the past 25 years has been marked by rapid development and wider use of physical, biochemical, immunologic, and microbiologic diagnostic methods, by refinements in instrumentation, and by automation. Many of these methods have been borrowed from research technics employed by clinicians or other scientists, and have been adapted to routine diagnostic use. Specific examples include blood banking, immunohematology, radioisotopes, autoradiography, electrophoretic methods, fluorescence antibody method, and exfoliative cytology. An important development of this period has been the organizational improvement of national societies of pathology and, with it, the increasing role played by the clinical pathologist in diagnosis.

THE FUTURE OF CLINICAL PATHOLOGY

What does the future hold for clinical pathology? It is inevitable for clinical laboratories to grow in scope and in degree of specialization. This will increase the emphasis on team work and the tendency to group practice. Pathologists will be expected to participate more and more in medical education and in research. With the elevation of the laboratory as the central medical workshop, pathologists will have the opportunity of making their laboratories, in Pasteur's words, "temples of the future for well-being and happiness."

In medical schools there is need and the prospect for: (1) fuller development of academic departments of clinical pathology in charge of full professors; (2) teaching of anatomic and clinical pathology in relation to living patients, rather than as detached specialities; and (3) closer relation and interdependence between anatomic and clinical pathology, especially since many laboratory technics are common to both.

Special developments in clinical pathology that seem certain to be prominent in the near future include: (1) contributions to the control of cancer and degenerative disease of the heart; (2) refinements in cellular and molecular chemistry, and in diagnostic criteria of disease; (3) application of electron microscopy in the diagnosis of physical and mental disease; (4) vast expansion of our knowledge of enzymes and hormones, chromosomes and genes; (5) emphasis on screening of latent or active disease and on maintenance of health and prevention of disease; (6) diagnosis of potential, latent or incipient disease, and of conditions that favor disease; (7) expanded application of automation and mechanical computation; and, finally, (8) an increasing role by the pathologist in interpretation, consultation, diagnosis, and management of disease.

The recent history of Clinical Pathology is the story of steady growth from a stage of limited diagnostic technics, through a stage of improved organization and of establishment as a recognized specialty of medicine, to its present position as a spearhead for application of newer knowledge and technics in the understanding, diagnosis, treatment and control of human disease. The momentum generated by the pioneers who organized this specialty has brought the clinical pathologist into the family of physicians in all types of practice and in all specialties. Clinical pathology appears destined to fulfill an ever increasing role in medical practice in helping to achieve the common goal of Medicine—the care, the cure, and the prevention of human disease.

THE VIRUS DIAGNOSTIC LABORATORY

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How does a virus diagnostic laboratory function? How much can it help the practicing physician in the diagnosis and treatment of infectious diseases? The answers to these questions change frequently, because the field of virology is such a swiftly moving one: In the past twelve years, more than 100 common new viral agents have been isolated, and many of these have been shown to be associated with various disease syndromes. The introduction of tissue culture methods for propagating poliovirus by Enders, Weller and Robbins[1], and the development of the plaque technique in animal virology[2] have provided relatively simple and accurate means for recovering viruses from patients suffering from a variety of illnesses. In this communication, we shall discuss some of the newer methods and their current applications in the virus diagnostic laboratory, with special reference to the isolation and identification of enteroviruses and viruses associated with respiratory illness.

TISSUE CULTURE PREPARATION

Two main types of cell cultures are used, one so-called "primary cultures", and the other, continous cell lines. *Primary cultures* are made from freshly minced tissues, either animal or human, which are then treated with trypsin to disperse the cells. Kidney tissue is the most commonly employed, but other tissues are also used to some extent. Nutrient medium, most commonly containing balanced salt solution, animal serum, and antibiotics, is added to the dispersed cells; these are then inoculated in amounts of approximately 300,000 cells per ml, into tubes or bottles, and allowed to grow at 37° C for 5-7 days. By this time, the cells have multiplied and formed a solid sheet on the glass (Fig. 1-A). The fluid is replaced with fresh nutrient medium and the cultures are ready for inoculation with materials to be tested for virus. Less commonly used forms of primary cultures include the plasma clot type, in which pieces of tissue are embedded in chicken plasma, bathed in nutrient medium, and allowed to grow; or of the suspended cell (Maitland) type, in which pieces of tissue are suspended in small flasks containing nutrient media.

Continuous cell line cultures utilize cells which have been obtained either from cancerous origin (HeLa, Hep-2 or KB), or from human amnion (FL) or other normal tissues. These cultures can be propagated serially, using trypsinization for dispersion of the cells, and growth in nutrient media, as with primary cultures.

The susceptibility of different types of cell cultures to different virus infections is varied; depending, therefore, upon the agent one is looking for, one or another cell system is selected.

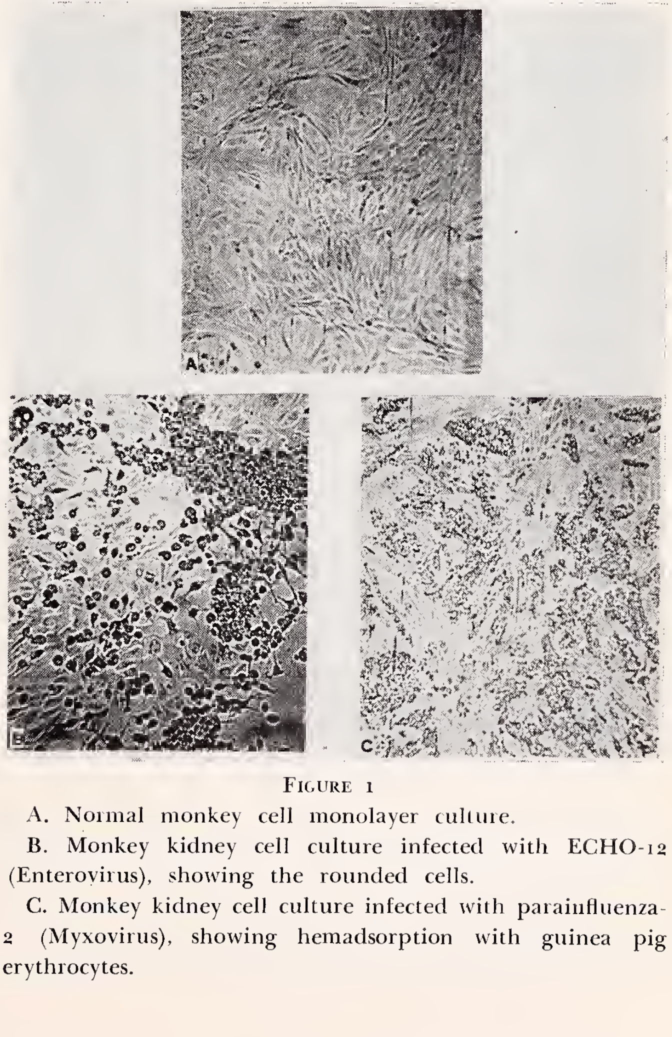

FIGURE 1

A. Normal monkey cell monolayer culture.

B. Monkey kidney cell culture infected with ECHO-12 (Enterovirus), showing the rounded cells.

C. Monkey kidney cell culture infected with parainfluenza-2 (Myxovirus), showing hemadsorption with guinea pig erythrocytes.

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VIRUS ISOLATION

Materials to be tested, such as fecal excretions or throat swabs, are made into suspensions, centrifuged, and treated with antibiotics to prevent bacterial and fungal contamination. The inoculum is added to suitable tube or bottle cultures which are then incubated at 37° C. At intervals, over the next 2 weeks, the cultures are examined microscopically for evidence of virus activity. This becomes apparent with many agents, including poliovirus, Coxsackie and ECHO viruses, in the form of cytopathic effects (CPE). This means that the cells degenerate, often in a characteristic fashion, swelling and rounding up (Fig. 1-B) and eventually falling off the glass. When such degeneration appears, the culture is harvested and identification of the agent is carried out with specific antisera, usually in neutralization or complement fixation tests.

Some viruses, notably certain respiratory ones, even though they multiply well in the cell system, do not show such distinct cellular changes. Their recognition is dependent therefore upon another phenomenon, viz. hemadsorption[3], originally described by Shelokov *et al.*[4] When these viruses are present in a culture, the addition of a 0.5% guinea pig red blood cell suspension results in the appearance of clumps of these red cells, stuck to the cell sheet, as illustrated in Figure 1-C. If no virus is present, the red cells simply float in the media and do not adhere to the cells.

In addition to tissue culture methods, for isolation of certain agents (e.g., most Coxsackie A viruses and certain arthropod-borne viruses) it is necessary to inoculate infant mice. Inoculations of embryonated eggs are also used, particularly for recovering influenza viruses, vaccinia, and herpes simplex, although all of these latter agents grow well in tissue cultures too.

SEROLOGICAL TECHNIQUES

These include neutralization, complement fixation, hemagglutination inhibition and hemadsorption inhibition. Generally, these tests can be used: 1) to identify a virus isolated from a patient, by setting up the unknown agent against a number of specific antisera and 2) to demonstrate the development of antibodies to a known agent in a given patient. It is necessary to show a four-fold rise in titer for diagnostic significance.

The Enteroviruses

This family of agents includes the 3 types of poliovirus, 25 Coxsackie viruses (19 types of Group A and 6 Group B) and some 28 types of ECHO viruses. These agents are most prevalent in the summer months and have been found to be etiologically related to a variety of disease syndromes, including nonspecific febrile illnesses and aseptic meningitis, either with or without rash; herpangina (Coxsackie A); pleurodynia, myocarditis (Coxsackie B); and paralysis (polioviruses; occasionally Coxsackie B and certain ECHO viruses).

COLLECTION OF SPECIMENS

Stools or rectal swabs are the best source of virus; throat swabs and spinal fluid should also be tested. The enteroviruses are relatively stable and can be kept at +4° C or −20° C for some time; however, samples collected for viral studies should be delivered to a virus laboratory as soon as possible. Generally, an acute phase serum should be obtained when the above samples are collected, and a convalescent serum sample 3 weeks after onset.

ISOLATION AND IDENTIFICATION

Rhesus monkey (*Macacca mulatta*) kidney cell cultures are used routinely for the isolation of enteroviruses, although other monkey kidney cells, human kidney cells, and certain continuous cell lines such as HeLa can also be used for some of the agents. Figure 1-B illustrates the cytopathic effect (CPE) in monkey kidney tissue culture induced by a typical enterovirus.

Human kidney cells, especially from babies, obtained from autopsy or surgical sources, offer great advantages in the isolation of enteroviruses.[5] Recently we have isolated from a stool sample an agent—as yet unidentified—which grows only in primary human cell cultures.

The usual procedure for identifying a newly isolated enterovirus is the neutralization test against various types of specific antisera, including Coxsackie, ECHO and poliovirus. This involves considerable time, labor, and expense. In order to shorten the procedure, the use of differential cell cultures as "selective media" in the identification and classification of enteroviruses has been suggested.[6] The method depends on the fact that different viruses have distinct "host ranges" in terms of cell systems. For example, the use of kidney cells of one particular monkey, *Erythrocebus patas* (the red husser or military monkey) have been useful in this connection: if a given isolate grows well both in rhesus and patas cells, it is probably a poliovirus or one of the Coxsackie group B viruses; if, on the other hand, the virus grows well in rhesus but *not* in patas cells, it belongs to neither of the above groups, but may be Coxsackie A 9 or one of several particular ECHO viruses designated as group A.

Another characteristic which correlates well with host cell range is "plaque morphology".[7] The latter refers to a technique originally described by Dulbecco[2] and modified in this laboratory.[8] This technique is in some ways comparable to colony morphology in bacteriology. Instead of a Petri dish, a stoppered 3 oz. medicine bottle is commonly used,

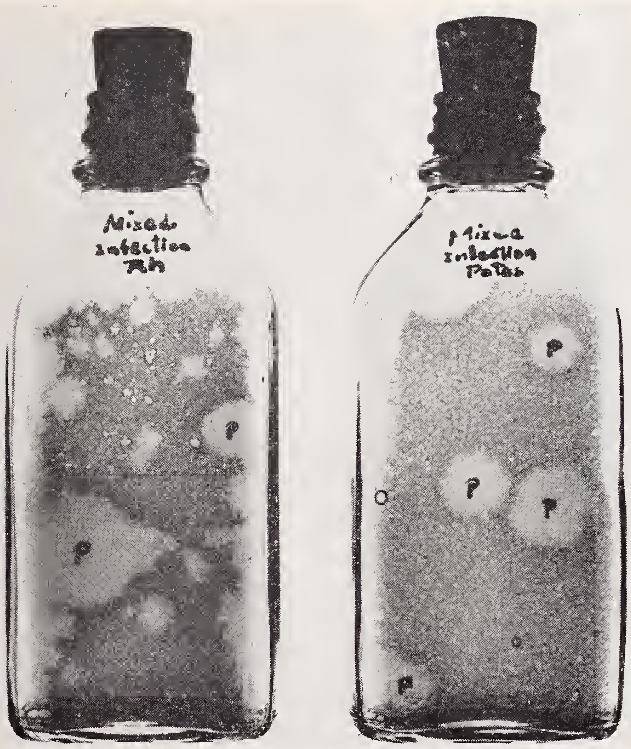

FIGURE 2
Monkey kidney cultures inoculated with a fecal sample containing two kinds of viruses.

Bottle at left: rhesus culture showing both poliovirus type 1 (large circular plaques), and ECHO virus type 1 (small irregular plaques).

Bottle at right: patas culture, showing only poliovirus.

on one wall of which a monolayer of cells is grown in a confluent sheet. The specimen to be tested is inoculated into the bottle culture and the monolayer is then covered with nutrient agar containing neutral red, a vital stain. As the virus propagates in the cells under the agar, an area of necrosis is produced. The cessation of cell metabolism in this area results in a release of neutral red from the cells and a decolorized zone—or plaque—appears which contrasts with the rosy pink of the healthy cells surrounding it. The shape and size of the plaque is characteristic for different groups of enteroviruses, as shown in Fig. 2. The plaque technique when combined with differential cell susceptibility is especially helpful in identifying mixtures of viruses which may be present in a single specimen. An example is given in Fig. 2, which shows two cultures, one of rhesus cells, one of patas cells, both inoculated with the same specimen. The rhesus culture (left) has two kinds of plaques, one large and one small, while the patas culture (right) has only the large plaques. On the basis of this result, the large circular plaques were tentatively identified as due to a poliovirus, and the small irregular ones, to an ECHO group A virus. Subsequent neutralization tests confirmed this and revealed that the viruses were actually poliovirus type 1 and ECHO virus type 1. Thus, with these two methods, differential cell susceptibility and plaque morphology, a presumptive identification of an enterovirus can be made as soon as the culture becomes positive, and considerable labor is saved. The final identification is then completed by means of neutralization tests with the specific antisera indicated.

Diagnosing an enterovirus infection by means of serological tests on the patient's acute and convalescent serum samples is also possible. However, since the enterovirus family now numbers more than 60, it is not a practical approach except in selected cases. Virus isolation remains, therefore, the chief diagnostic tool for identifying etiologically illnesses associated with these agents.

Respiratory Viruses

The known agents commonly involved in respiratory tract infections are the influenza and parainfluenza groups of myxoviruses, adenoviruses, and a number of other agents such as Eaton virus and respiratory syncytial agent, both of which have been isolated primarily from lower respiratory tract infections, and various "common cold" viruses which have been found in mild upper respiratory illnesses.[9] In general, however, it can be said that respiratory illnesses can be caused by a variety of viral agents; and conversely, a single virus family can produce any syndrome from the common cold to pneumonia.

COLLECTION OF SPECIMENS

Since many of the respiratory viruses are relatively unstable (especially the parainfluenza virus group), special precautions are necessary in order to have suitable material for testing. Throat swabs, which have proven as satisfactory as throat washings for isolation of respiratory viruses, are placed in tubes containing Hanks balanced salt solution with gelatin or milk added as preservatives. Nose cultures are handled similarly. The specimens should be brought to the laboratory as quickly as possible, and either inoculated at once, or frozen, preferably at −70° C.

Certain of the adenoviruses are excreted in the feces, and rectal swabs or stool specimens may also be used for virus isolation.

Paired serum samples should be collected early during the acute phase and 2 or 3 weeks later. Serologic tests often can establish the etiological agent involved when virus isolation is unsuccessful.

MYXOVIRUSES

These include, besides influenza, the new group, parainfluenza virus types 1, 2 and 3, which have been shown recently by Chanock and others[10] to be important causes of respiratory illness, particularly in children. These agents have been isolated from cases of mild respiratory infection, croup, bronchitis, bronchiolitis and penumonia. Monkey kidney cells are used routinely for isolation of the parainfluenza virus group and may also be used for influenza viruses; however, embryonated eggs are more sensitive than monkey cells to the influenza group, and are commonly employed for primary isolation.

As noted above, the myxoviruses produce little CPE in monkey kidney cell cultures and their presence is indicated by the hemadsorption phenomenon when guinea pig red blood cells are added to the culture 4 or 5 days after inoculation (Fig. 1-C). The identification of the agent is accomplished either by hemadsorption-inhibition or by hemagglutination-inhibition tests in which known types of specific antisera are used.

ADENOVIRUSES

These agents account for a certain amount of respiratory illness in young children, and they have been responsible for repeated epidemics in military recruits; however, in general, they do not seem to be important causes of respiratory infections in civilian life. The adenoviruses grow best in continuous cell line cultures such as HeLa or Hep-2, which are the cultures of choice for isolating these agents. The type of CPE produced is different from that seen with enteroviruses, and consists of quite characteristic grape-like clusters of degenerated cells. Identification is usually made by setting up the virus isolate in a complement fixation test with adenovirus antisera.

OTHER RESPIRATORY VIRUSES

Respiratory syncitial virus produces a typical syncitium formation in KB cells, but not in monkey kidney cell cultures.[11] The *Eaton* virus which has been associated with the cold-agglutinin type of primary atypical pneumonia, can be isolated in embryonated eggs, and in monkey kidney and other cells. Its presence is detected by means of the indirect fluorescent antibody technique[12], a complicated method at present not generally available in diagnostic laboratories. In addition, there are a number of other agents which have been recovered by inoculating humans with infected nasal washings and also by using various tissue culture techniques.[9] Most of these viruses are associated with mild respiratory illness, the common cold syndrome; how widespread they are is at present unknown, but some have caused epidemics in various parts of the United States and England.

Miscellaneous Virus Diseases

MEASLES

This virus can be isolated from throat washings and blood of patients, if specimens are collected during the first 24 hours after the appearance of the rash. Monkey and human kidney cells and some cell lines are susceptible to measles virus, but isolation is difficult and slow. For this reason, serological tests, either CF or neutralization, are more useful than virus isolation in establishing the diagnosis in doubtful cases. A significant rise in antibody is sometimes detected in susceptible children who have received gamma globulin after exposure, and have shown no clinical signs of the disease. The situation is interpreted as indicating that inapparent infection occurred, and resulted in an antibody response and, presumably, active immunity.

Serological tests are also useful in determining whether an exposed person is immune or not, for antibodies to measles virus persist for many years after the infection.

MUMPS

Like measles, this is a difficult virus to isolate and the diagnosis is usually made by demonstrating a significant rise in CF antibody during the course of illness. Virus isolation from throat swab and urine can occasionally be accomplished in monkey kidney tissue culture or embryonated eggs.

HERPES SIMPLEX

This virus grows well in HeLa and Hep-2 and a variety of other cell cultures but less well in monkey kidney cells. We have found one strain which grows best in primary human amnion cultures. Isolation of herpes virus from primary infections, from recurrent lesions, and from disseminated herpes or eczema herpeticum is a relatively easy and reliable diagnostic procedure. Antibody tests are often not very revealing with this infection, for rises may not occur even though the virus is isolated.

Discussion

Recent illness surveys indicate that viruses account for more than 90% of the common respiratory illnesses[13] and probably a similar proportion of "non-specific" clinical syndromes. The foregoing discussion indicates that viral diagnostic procedures have been improved enormously since the introduction of tissue culture methods. However, they are still far more expensive, laborious, and time consuming than are bacteriological ones. The patient often has been discharged from the hospital before the isolate has been identified. Even if the identification is accomplished within a week's time, the information does not alter the treatment, for there are as yet no specific therapeutic agents available for viral infections. The advantages to the physician in establishing an etiologic diagnosis in viral infections at present comes down then, to the following:

1) The satisfaction of knowing what the cause of the disease was, whether poliovirus or another

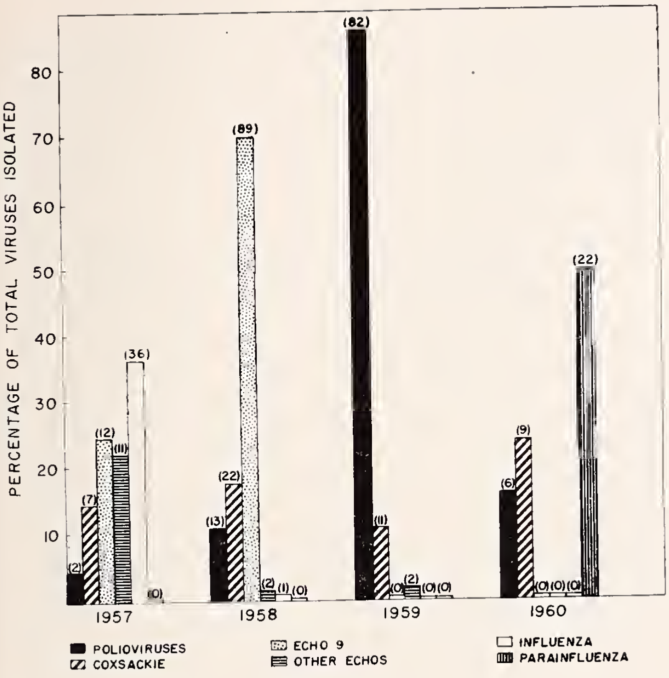

Figure 3

Percent of isolations by virus type, July to December, 1957-60, Yale-New Haven Medical Center. Numbers in parentheses indicate numbers of isolations each year.

enterovirus, or whether an influenza, parainfluenza, or some other respiratory virus.

2) An inceasing awareness of the specific viral agents which cause so much human disease, and a sharpening of clinical acumen in differentiating viral and bacteriological illnesses. This in turn inhibits the tendency to use antibiotics unnecessarily, and has beneficial consequences for the patient with a viral infection: since antibiotics do not alter the course nor are they effective in preventing bacterial complications, the patient is spared expense and possible harm in terms of drug reactions, sensitization, etc.

3) A knowledge of the agents prevalent in a given community can be an important epidemiological aid in clinical diagnosis. Particularly in epidemic times, such information gives the physician a lead in considering diagnostic possibilities in patients and their families: each year, both in winter and in summer, a different pattern of viral infections in the community has been reflected in the results obtained by the Viral Diagnostic Laboratory of the Yale New Haven Medical Center. The results for the months July to December for the period 1957 through 1960 are shown in Fig. 3. It can be seen for instance, that in 1958 (in the summer) the picture was dominated by ECHO 9 virus, and only a scattering of other enteroviruses were isolated. In the same season in 1959, however, polioviruses were most prominent, and only a few non-polio enteroviruses were found. In 1960, the results suggest that few enteroviruses of any type were active in the summer months; in the fall and winter, however, parainfluenza type I was prevalent. This first appearance of parainfluenza virus in 1960 does not mean that it was not present in earlier years, but simply that techniques for its isolation have been introduced and improved so that routine testing for this group of viruses is now feasible. This event will undoubtedly be repeated with other new agents, and as methods continue to improve, it will be possible to identify etiologically more and more of the illnesses which are now classified as presumably viral.

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LABORATORY CONTROLS IN HEMOLYTIC DISEASE OF THE NEWBORN

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THE importance of laboratory controls to the adequate practice of modern medicine is well illustrated in the instance of hemolytic disease of the newborn. Here the laboratory is essential (1) to the early casefinding which is essential to adequate antenatal preparedness for a potentially sick infant, (2) to the evaluation of the need of the newborn infant for definitive treatment, and (3) to the evaluation of the possible need of the infant for further therapeutic measures after initial treatment.

It is proposed to review the areas where the contribution of the laboratory to management of hemolytic disease of the newborn is critical, with emphasis on pitfalls which may be encountered from time to time. Other general problems in hemolytic disease have been reviewed or summarized elsewhere.[1,2]

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CASE-FINDING

At the time of the discovery of the relationship between the Rh factor and hemolytic disease of the newborn, the techniques for demonstrating blood group incompatibility had been unchanged in their essentials for many years and, seen in retrospect, were crude indeed. The earliest dilemma was the apparent absence of anti-Rh antibody in the serum of many Rh negative mothers of Rh positive infants with evident hemolytic disease. The refinements of technique which ultimately resolved this dilemma are standard now and have made the antenatal diagnosis of possible hemolytic disease for the most part secure where it is urgent, and they have contributed enormously to the safety of blood transfusion. These techniques include the slide test, the use of colloidal media which enhance agglutination of cells in their specific antisera, and the antiglobulin (Coombs) method.

In A or B incompatibility antenatal case-finding finds no firm laboratory support, since anti-A and anti-B antibodies are normally found in mothers of Group O (who are at greatest risk of having a sick infant), and because qualitative differences between various types of anti-A or anti-B antibodies, while unquestionably related to hemolytic disease, do not distinguish between mothers whose incompatible infants *will* and those whose infants *will not* have hemolytic disease of clinically consequential degree. Fortunately, in A or B incompatibility antenatal diagnosis of disease is rarely urgent, and both case-finding and estimation of the need for treatment will rest in the main on the occurrence of and study of neonatal hyperbilirubinemia.

In general, mothers of infants with evident hemolytic disease due to A or B incompatibility will have anti-A or anti-B (or both) which are difficult to neutralize with A and B specific polysaccharide substances,[3] and which have hemolytic activity in addition to giving agglutination reactions.[4] Although these so called "immune" Anti-A and anti-B antibodies (in contrast to "natural" anti-A and anti-B antibodies) cross the placenta and become attached to the infant's cells, they do not give a positive direct antiglobulin (Coombs) test in the infant unless special care is taken in preparation of[5] or selection of[6] the antiglobulin reagent. That these cells do, however, carry coating antibody particles can often be demonstrated through their tendency to spontaneous agglutination in a variety of colloidal media. The elution of this antibody from the cells of the infant is sometimes possible but not necessarily diagnostic, since recovery of antibodies sometimes occurs from the cells of incompatible infants with no signs of disease.[7] A or B incompatibility may be presumed to be the cause of neonatal jaundice in the incompatible infant who has abnormal numbers of spherocytes and reticulocytes, who may have a weakly positive or negative Coombs test, whose mother is of group O with "immune" anti-A or anti-B, and in whom hereditary spherocytosis and other possible causes of jaundice can be excluded.

Although the techniques for antenatal casefinding generally operate satisfactorily in Rh incompatibility and are not needed in A or B incompatibility, errors occur occasionally. A mother may be reported erroneously as Rh positive, for example, and the false report perpetuated in the transfer of information from the record of one pregnancy to the next, unless the physician is careful always *to type every pregnant woman in every pregnancy*. If in the case of every Rh negative woman (and of all others with history of blood transfusions or injections, previously jaundiced infants, or unexplained fetal deaths), the same specimen used for initial typing is examined for presence of abnormal antibodies, maternal sensitization will be known as early as possible. The cost of this little routine is modest; its insurance value is enormous.

Once sensitization is discovered, the infant must be presumed at risk and fetal death a possibility. At present only early delivery of the sensitized mother seems to offer hope of averting fetal death. The various aspects of this problem have been discussed elsewhere,[2] and some possible indications for interruptions of pregnancy considered. It is as yet unsettled as to whether serial determinations of titer of antibody will be generally helpful in indicating whether or at what time pregnancy will be interrupted for prevention of stillbirth. It seems highly likely that if serial titrations are to be done and their interpretation attempted, changes in titer will deserve no high degree of confidence unless portions are preserved frozen of each of the serial specimens submitted for any given patient and aliquots of these portions examined with each new specimen by a technician who will use the same test cell for all titrations, will incubate all tubes together for the same period of time, and will read the tubes in a standard manner, preferably with all the tubes of a given titer being shaken together in the same hand. Under these rigorous conditions it may be possible, with whatever sensitive techniques used, to accept the reality of fourfold or greater changes in titer, if the results seem clear cut. Nothing less than this degree of technical control seems likely to justify confidence in any but the grossest kind of change in titer, such as appearance of very large amounts of antibody where there was little or none before. But even when the reality of changes in titer can be accepted, it remains undetermined as yet how these are to be best used in management of the individual sensitized pregnancy.

APPRAISAL OF THE INFANT AT BIRTH

The diagnosis of hemolytic disease due to Rh incompatibility in the infant of a sensitized Rh negative mother is adequately established when it is shown that he is Rh positive. Such infants generally have an easily demonstrated positive direct antiglobulin (Coombs) test. Failures to demonstrate this are far more often due to laboratory error than to any other possible cause, such as that the infant might have mild disease. On the other hand, on rare occasions, in infants with *fatal* hemolytic disease due to Rh incompatibility (once in an infant with hydrops) we have observed repeatedly negative Coombs tests which we feel were not due to simple technical error but to some unexplained immunologic anomaly of man or rabbit. Both these experiences and the rather frequent erroneous reports of negative Coombs tests teach us that a negative Coombs test is not reassuring if other evidence suggests hemolytic disease; moreover, in A or B incompatibility such a negative test is generally to be expected. We regard it as *essential* to know the Coombs reaction when a sensitized Rh negative mother delivers an infant which appears to be Rh negative. If this infant has a positive Coombs test, he must even if clinically normal be assumed Rh positive and at risk until some other adequate explanation of his protein-coated cells is found. When, on the other hand, a positive Coombs test is found in a jaundiced infant in whom ordinary Rh or Hr (c) or A or B incompatibility cannot be shown, the positive test suggests that the icterus has nonetheless an immunologic origin and that there is need for pursuit of rarer incompatibilities such as Kell, S, s, and the like.

GUIDES TO THERAPY

The need of the infant with hemolytic disease for exchange transfusion at birth is sometimes urgent. When this is true, its urgency will not necessarily wait upon laboratory evidence of hemolytic disease, but will be evident in the critical nature of the infant's clinical condition. In the pale, edematous infant with marked hepatosplenomegaly, exchange transfusion ought sometimes to be undertaken without waiting for laboratory data, inasmuch as the adequate resuscitation of the infant may depend upon immediate relief of increased blood volume.[8] For these infants the laboratory will have served its function if it has made available prior to delivery donor blood for the infant which has been shown to be compatible with the maternal serum by the indirect antiglobulin (Coombs) technique.

The necessity for choosing blood which can be shown compatible with maternal serum is still not universally appreciated. Only blood chosen in this way is reasonably assured of being safe for the infant even if the mother should have multiple sensitizations, as is sometimes the case. And in the case of *unexpected* hemolytic disease (such as might be indicated by a positive Coombs test in an infant with hepatosplenomegaly, anemia or hyperbilirubinemia in the immediate neonatal period), even without exact knowledge of the blood group factors involved, safe and specific treatment can proceed so long as donor blood chosen for the exchange transfusion of the infant can be shown compatible with the mother's serum by the antiglobulin technique. To match the donor blood with the serum of the infant is not enough; it was long ago demonstrated that the infant with severe hemolytic disease might well have no antibody free in his serum. A single example will suffice to illustrate this point:

> The Group A Rh positive infant of a group O Rh positive mother was found to be markedly jaundiced within the first two days of life. Hemo-

lytic disease due to A incompatibility was suspected, since the Coombs test was reportedly negative. An exchange transfusion was carried out with group O Rh positive blood which was shown compatible with the infant's serum. On the day following this exchange transfusion, quite unexpectedly, the infant's icterus had increased markedly in intensity, with the bilirubin level being reported 89 milligrams per 100 ml. Further exchange transfusions were carried out using other bloods compatible with the infant's serum, including group O Rh negative blood. Because the hyperbilirubinemia had not responded as expected, the original diagnosis of A incompatibility was subjected to more careful scrutiny, with the discovery that the infant's original direct Coombs test was positive (the original report having been a laboratory error) and that the mother had large amounts of anti-c antibody. Each donor blood was shown to be c positive and incompatible with maternal serum, owing to the latter's content of anti-c. The ultimate death of the infant seems in retrospect to have been a potentially preventable catastrophe.

Once learned, the lesson is hard to forget. *It is more important that the donor blood for the infant with hemolytic disease of the newborn be shown to be compatible with maternal serum than with the infant's serum.*

In infants in whom a precarious clinical state at the moment of delivery does not demand an immediate transfusion, a decision to carry out prophylactic exchange transfusions sometimes rests on laboratory evidence available through the study of cord blood. Frank anemia (hemoglobin levels below 13 gm. per 100 ml.) or latent hyperbilirubinemia (cord bilirubin above 4 or 5 mg. per 100 ml.) may indicate need for immediate therapy. A lesser degree of anemia or hyperbilirubinemia, if buttressed by noteworthy family history or significant prematurity of the infant, may suggest less urgent *prophylactic* exchange transfusion. But the increasingly over-riding principle in management of the baby with hemolytic disease *born alive and in good condition* is that the only serious threat to his survival is the possibility that kernicterus might occur in association with high levels of serum bilirubin, generally in excess of 20 mg. per 100 ml. Accordingly in such infants in good condition at birth the election to do exchange transfusion will often rest upon a demonstrated or predicted rise in level of bilirubin to this dangerous point.

Although the management of hemolytic disease of the newborn has leaned very heavily upon the determination of the level of serum bilirubin for the past few years, there has been widespread uphappiness with reliability of measurement of serum bilirubin, growing out of difficulties in the establishment of satisfactory micro-techniques, and out of the inability of independent laboratories to agree as to levels found. In recent months the situation has become considerably improved, particularly through the development of "synthetic serum" standards,[9] such as one employing 4% serum albumin as the stabilizing substance for bilirubin in an aqueous medium.[10] But even with more satisfactory techniques, some precautions need to be taken if the serum bilirubin level is to be interpreted with confidence.

It is first of all necessary to understand how the level of serum bilirubin in the infant may change, both in the minutes immediately after birth, and in response to exchange transfusion. It is clear that in the infant with an established high level of serum bilirubin, exchange transfusion is capable of lowering the immediate level of bilirubin to somewhere near 1/4 to 1/3 of its value at the beginning of the transfusion. This indicates a less efficient removal of bilirubin than would be calculated with the assumption that no diffusion from the extravascular compartment occurs during the time that the exchange transfusion is in progress. In actuality, this diffusion is fairly rapid, and equilibration between extravascular and plasma bilirubin is reached within an hour or two of the time that an exchange transfusion is terminated, most often at a level approximately 3/4 of the original level. This suggests that a conventional exchange transfusion which employs approximately 500 to 600 ml. of blood in an infant of 6 to 7 pounds (3 to 3.5 Kg.) actually removes approximately 1/4 of the total body bilirubin.

It seems evident that similar diffusion of bilirubin is taking place from fetal to maternal blood during intrauterine life and that equilibration may lead to a rapid rise in bilirubin level just after birth in some infants with extravascular excesses of bilirubin. The most rapid early rise in serum bilirubin that we have observed is a rise from 12 mg. per 100 ml. in cord blood to 20 mg. per 100 ml. one hour after birth. It seems inescapable that this initial rapid rise in serum bilirubin represented an equilibration phenomenon. In most infants with hemolytic disease the amount of excess extravascular bilirubin involved is not nearly so large as in this infant, so that the bilirubin level in cord blood may be very nearly representative of the state at equilibrium, when the blood level reasonably reflects the level throughout the space in which bilirubin is distributed in the body. Except when an early rapid rise in bilirubin level represents equilibration, the change in bilirubin level from the level in cord blood to a new level determined some hours later may fairly be interpreted as showing the approximate rate of formation of new serum bilirubin. Inasmuch as in full term infants there is a rising level of serum bilirubin which is likely to be approximately linear for forty-eight hours or more, it is suggested that a rate of rise of 0.5 mg. per cent per hour or more during the first day predicts that the level of 20 mg. per cent will be exceeded within forty-eight hours. Under these circumstances, in infants in whom no immediate need for exchange transfusion was evident at birth, an exchange transfusion may be seen to be very likely necessary as soon as within the first twelve hours of life.

Often, when serial measurements of serum bilirubin are being made in order to determine possible need for exchange transfusion, doubt may exist as to whether an observed difference of one or two milligrams per 100 ml. in the region around 20 mg. per 100 ml. means that between the times of these two measurements the bilirubin level has been actually rising or actually falling. We have learned that the best way of determining the truth of the matter is always to collect at each determination of serum bilirubin enough serum for one or two additional tests beyond the one needed immediately. When the additional tests are carried out at the same time that samples of serum drawn at later hours are examined, and when, with each set of samples of serum, standards are also run (the standards containing 10 and 20 mg. per 100 ml. of bilirubin), then it is possible with greater precision than otherwise to specify whether an observed level is above or below 20 mgs. per cent and whether changes from previous levels mean that the bilirubin level is, in fact, rising or falling. It is little more trouble on any given occasion to determine the levels of bilirubin in three or four specimens than in a single specimen; we have found that the coupling of a pair of consecutive specimens drawn from the infant with a synthetic serum standard as control (or two standards, one at 10 mg. per 100 ml. and one at 20 mg. per 100 ml.) is so very helpful in pinpointing bilirubin values that we would urge the adoption of this rather rigorous control as routine.

Needless to say, to focus attention upon the serum bilirubin as of prime importance in management of the infant with hemolytic disease should not be taken as suggestive that other laboratory controls are not useful. Attention to hemoglobin levels, reticulocyte counts, and other evidence of hemolytic activity may be both useful and necessary in guiding therapy of the infant with severe anemia at birth or in whom anemia develops during the neonatal period. On the other hand, these techniques are standard, generally offering little difficulty in interpretation, and choice of therapy seldom hangs so heavily upon the laboratory here as in respect to the serum bilirubin. In particular, except as the hemoglobin level in cord blood may indicate an active and possibly serious hemolytic process needing or warranting immediate therapy, the hemoglobin level alone scarcely demands use of exchange transfusion in preference to more conventional transfusion therapy. We have, in fact, within the past few years, become more tolerant of mild anemia evident even in cord blood hemoglobin levels. It seems unlikely that in the absence of other indications, in an infant in reasonably satisfactory condition at birth, any hemoglobin level as high as 12 or 13 grams offers a compelling indication for immediate exchange transfusion. In such infants, we will generally want some such further indication for immediate therapy as clinical evidence of an active hemolytic process (moderate or marked hepatosplenomegaly), prematurity, or elevation of cord serum bilirubin level above 3.5 to 4.0 mg. per cent.

REDUCTIO AD VACUUM

It is instructive sometimes to reduce the number of elements in a complex problem to point where one is left with the irreducible number of essential items of concern. When the process of analysis, simplification, and discarding of all but absolute essentials is applied to the elaborate array of tests available for study and management of hemolytic disease of the newborn, the student of this problem may wish to name the tests or techniques which he might need in order to be able to handle an infant with hemolytic disease on a desert isle, or in some other nearly perfect technological vacuum. I believe the number of technical procedures demanded of the laboratory could be reduced to *two*. These are the antiglobin (Coombs) technique, for direct test of cells (or for crossmatch), and an accurate measurement of serum bilirubin. The direct antiglobulin test of the infant's cells will first permit diagnosis of hemolytic disease to be made in the vast majority of instances where A or B incompatibility is not the cause, and the indirect antiglobulin technique used in the crossmatch will then permit the choice of appropriate donor blood, so long as maternal serum and an adequately large number of donors are available for screening. The accurate measurement of serum bilirubin will insure that the use of exchange transfusion in control of hyperbilirubinemia will rest upon a firm foundation. Both of these techniques are sensitive and subject to error. Occurrence of an unexpected negative Coombs reaction should not lead to dangerous inaction so long as the vagaries of the test are appreciated; and the necessary crossmatch using the Coombs technique can generally be done with sufficient controls to insure confident interpretation. The measurement of trends in level of serum bilirubin will rest on the firmest foundation if determinations of the level in successive specimens are made at the same time as stable standards are replotted, in the manner suggested above. Other tests or techniques used in the study or management of hemolytic disease add elegance, refinement, or convenience to the care of the affected infant, but none are in the same measure as indispensable as these two.

SUMMARY

The laboratory controls essential to the management of hemolytic disease of the newborn have been reviewed, with special emphasis upon the crucial roles to be played by the antiglobulin (Coombs) technique and the accurate measurement of serum bilirubin. The importance of using donor blood compatible with the maternal serum is illustrated. The suggestion is made that serial determinations of bilirubin level will give the most useful information when aliquots of consecutive specimens are re-examined, together with stable standards, each time a new level of serum bilirubin is determined. Such a procedure will give the physician the best possible opportunity of knowing whether a bilirubin level is above or below 20 mg. per cent, rising or falling.

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FLUORESCENT ANTIBODY TECHNIC IN THE PATHOLOGY LABORATORY

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The pathologist is always seeking methods of diagnosing diseases with increased accuracy. Improved methods are especially welcome when results can be obtained within a reasonable length of time. The fluorescent antibody technic currently fulfills these objectives for selected specimens in a number of cases of infectious diseases, to mention but one of the areas of its application. Dr. A. H. Coons of the Harvard Medical School reported his development of the fluorescent antibody technic in 1941.[1] The technic has been very useful in research in the intervening twenty years while its use as a diagnostic procedure in the pathology laboratory is relatively recent. The great value of this technic is that antigenic substances of microscopic size can be made brilliantly visible with a fluorochrome labelled antiserum. They are thus specifically identified.

The fluorescent antibody technic is essentially a serological procedure in that antibody, labelled or tagged with a fluorescent dye, is the critical reagent. As a specialized serological procedure it can be applied successfully in most instances where a specific antigen-antibody system is available. The serology section of the laboratory may eventually apply this test as a routine diagnostic procedure for the same purposes as it now employs agglutination, precipitation and complement fixation tests. When true positive results are obtained in each of these tests an antigen-antibody reaction occurs which permits an interpretation on the basis of its particular visible end-product. The conventional serologic tests are performed with aqueous solutions or suspensions, while with the fluorescent antibody technic the unknown material is examined in the dried state and a positive result is obtained from the specific staining of the test object. It is also possible to identify selectively, within sections of tissue, known chemical components which are antigenic. This is the feature that holds much promise for the histopathologist, for he is now offered a means of identifying not only antigens but also antibodies localized in tissue. Thus it is hoped that surgical and autopsy specimens, which currently pose diagnostic problems, may eventually cease to be problems through the application of the technic.

THE DEVELOPMENT OF THE REAGENTS

This technic was devised during the late 1930's following two interesting developments in the field of immunology earlier in that decade. First, it was shown that labile antibodies could be chemically modified without destroying their specificity;[2] and second, that aniline dyes could be coupled to antibodies without modifying the specificity of the antibodies.[3,4] These dyes could be seen in macroscopic serological reactions,[5] but they were difficult to visualize microscopically because they were present in minute quantities. Coons, working with Creech,[6] successfully coupled anthracene and then fluorescein to antibody. Fluorescein, though present in minute traces, could be activated with an intensely bright light to become visible with a brilliance unequalled by the aniline dyes. The original fluorescein compound developed was the isocyanate. Its synthesis was a hazardous process and the compound was unstable. Riggs[7] synthesis of fluorescein isothiocyanate provided a stain of greater stability and so it became practical for commercial concerns to manufacture and offer it for sale.

The technic requires precision in the preparation of the antisera to assure the specificity of its antibody content and its purification in the form of gamma globulin. The globulin in turn must be coupled to fluorescein isothiocyanate. This reagent has also become available commercially. The availability of these reagents places the technic within the reach of the diagnostic laboratory, which does not have the facilities, skills or time required for their production, as is the case in laboratories devoted in part or entirely to research work. It does not relieve those who apply the technic with purchased reagents of their responsibility to apply it with precision and with the inclusion of appropriate controls to assure the specificity of the reaction.

THE TYPES OF STAINING PROCEDURES

The fluorescein labelled gamma globulin may be applied in two ways. First, it may be used in a direct staining procedure; and second, it may be applied in a two step indirect staining procedure.

Direct staining is currently being applied to the identification of Group A streptococci.[8] A frequent circumstance under which this test may be requested is familiar to all. A patient develops a sore throat that may be due to a streptococcus. Though the patient demands some form of therapy, most likely an antibiotic, he is told he must await the results of a test. Throat swabs are taken in the morning and sent to the laboratory. There they are placed in a tube of broth, incubated two hours, and then the tube is centrifuged and two smears are prepared of the bacterial cells in the sediment. The smears are fixed by heating or with ethyl alcohol and the Group A immune serum tagged with the dye* is placed on the test smear and the nonstreptococcus conjugate is placed on the control smear. The stain remains on the slide for 30 minutes, is then washed and covered with a coverslip mounted in glycerol saline. The examination is made with the fluorescence microscope. The dark field condenser of the microscope makes it possible to see all of the bacteria on the smear. The important thing is to find the cocci and determine if they stained a yellow or applegreen. The intensity of the yellow-green staining is recorded from 1+ to 4+. This evaluation of the green stain and its intensity requires experience. The entire procedure can be completed in 3 to 4 hours from the time the throat swab is taken to the time the results are reported of the presence or absence of Group A streptococci. The doctor can then decide whether to prescribe an antibiotic or withhold therapy on a patient he had seen in the morning of the same day. It is possible for the globulin prepared for Group A to react with Group C streptococci. Care must be taken to avoid this.

Direct staining has been applied to throat smears without incubation. One of the problems of this has been the scarcity of streptococci in the smears. The same direct staining can be applied to cases of infant diarrhea due to *Escherichia coli*, 0127:B8.[9] The organism may be identified from cultures, but it can also be identified from fecal smears of specimens unsuitable for culture. The antigen is stable in these dried organisms. Rabies may also be diagnosed by specific staining of the virus particles in the cells of the salivary glands from rabid animals. Imprints are prepared from the cut surface of the glands and stained directly.[10]

The indirect staining procedure was devised by Weller and Coons[11] when they successfully employed a two-step Coombs type of reaction, with fluorescein-labelled globulin being employed in the second step. The great value of this sandwich or layering technic is that for many tests only an anti-human gamma globulin serum need be labelled with the dye. Each test serum does not have to be individually labelled.

The indirect staining procedure is currently being applied in the diagnosis of syphilis.[12] The antigen is obtained commercially† in the form of lyophilized treponema. A small vial of the antigen, when reconstituted, is adequate for the preparation of 100 slides. The patient's serum is applied to the treponema smear, and incubated 30 minutes at 37°C. on a shaking machine. The slide is then washed and anti human gamma globulin, which is fluorescein labelled, is applied. After another 30 minutes incubation the slide is prepared for examination under the microscope. Again the control unstained spirochaetes are readily seen in the dark field preparation, and the remainder of the spirochaetes are compared with the positive controls and graded according to the intensity of their yellow-green staining. This appears to be the most sensitive and reliable test for syphilis. With the serum from some patients it is possible to obtain positive results at dilutions of 1/50,000. Another indirect staining procedure uses the complement of fresh guinea pig serum and fluorescein labelled anti-guinea pig globulin.[13]

The application of the technic to tissue sections has not been applied to routine diagnostic work. It has been successfully used in special studies for the identification of a variety of viruses, bacteria intrinsic tissue antigens and the formation of antibodies and gamma globulins. The reader is referred to the report of Mellors[14] for details of this work.

REFRIGERATION FOR SECTIONING FROZEN TISSUE

If the fluorescent antibody technic is to be applied to frozen tissue, the method of freezing and sectioning customarily used in the cutting of frozen sections from surgical specimens is not satisfactory. This method, which allows the tissue to soften on the warm knife blade and employs floating the section on water to straighten it, permits the displacement or diffusion of water soluble antigens as well as the weakening of the antigen concentration.

Several refrigerator cabinets* are available to house a rustproof* stainless steel microtome and the tissue being processed. They provide for the cutting and mounting of the tissue on slides at a temperature of -20°C, which has been found to be a satisfactory temperature in regard to minimizing the harmful effects on the tissue of the crystallization of water.

The do-it-yourself group has accomplished satisfactory sectioning by attaching small containers for holding dry ice behind the object holder and on the knife of the conventional microtome.[15]

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* Available from Difco Laboratories Incorporated, Detroit, Michigan.

† Baltimore Biological Laboratories.

* Cryostat, Coon's design, Harris Refrigeration Company, Cambridge, Massachusetts; Pearse's refrigerated microtome, National Instrument Laboratories, Inc., Washington 18, D. C.; and the new Harris International Microtome Cryostat, International Equipment Company, Boston 35, Massachusetts. This latter Company can also supply the rust-proof International Minot Rotary Microtome.

FLUORESCENCE MICROSCOPY

Fluorescence microscopy is required for the visualization of the fluorescein stained objects. There are now available from many of the major optical equipment manufacturers* fluorescent microscopy units which include an intensely bright light source and various arrangements for holding the filters required in the visualization of the light emitted by fluorochromes. Though the housing for the lamp varies in design among the different manufacturers, the lamp most commonly used is one of the high pressure mercury arc types, the Osram HBO 200. The emission spectrum of this lamp extends from 253 mu to over 600 mu and so provides light from the ultra violet through all of the visible colors.

Selected fluorescent dyes, in order to be visualized, must be activated by a particular wave length of light which it absorbs and then emits as a light of a longer wave length, all within one ten millionth of a second. Two filters are placed between the light source and eye of the observer to control the fluorescent emission. A primary pass or exciter or activation filter is placed between the lamp and the object to permit only the fluorescent exciting or activating wave length to be passed on to the stained object. A secondary excluding or barrier filter is placed between the object and the eye of the observer so that only the wave lengths characteristic of the fluorescent dye in use are seen, and also to prevent ultraviolet light from reaching and injuring the eye of the observer. A dark field condenser is generally used. A more intense fluorescence is obtained, of course, with a bright field condenser. A complete list of the filters and their characteristics, available from both domestic and foreign sources, is given in the *Handbook of Chemistry and Physics.*[16] A table of useful filter combinations appears in the manual by Cherry et al.[17]

FLUORESCENT STAINING WITHOUT THE USE OF ANTIBODIES

The fluorescent antibody technic is not to be confused wth the various applications of staining with fluorochromes alone. Bacteria, viruses and tumor cells have been selectively stained with fluorochromes and visualized when examined with ultraviolet light. Hageman[18] in 1938, three years prior to the reporting of the fluorescent antibody technic, described his method of staining the tubercle bacillus with the fluorescent dye auramine. Acridine orange fluorescence technic was applied to the identification of bacteria by Strugger [19] in 1940 and, more recently, to the identification of various viruses on the basis of their desoxyribonucleic or ribonucleic acid content by Armstrong and Niven[20] and by Anderson.[21] The use of acridine orange fluorescence for the identification of ribonucleic acid within the cytoplasm of tissue cells was reported in 1956 by von Bertalanffy and Bickin.[22] von Bertalanffy[23] by 1958, had reported the application of this fluorochrome to the identification of vaginal and cervical cancer.

These technics are examples of simple staining procedures which are based on relatively specific chemical bindings between cells and the particular fluorochromes. The staining is accomplished without the interaction of antibodies. The technics do offer several useful applications of fluorescence microscopy and so tend to justify the expense of modern fluorescent microscopic equipment for the pathology laboratory.

CONCLUSIONS

The fluorescent antibody technic is a useful research technic which has been successfully applied for the identification of many antigenic substances. It currently may be reliably employed in a hospital laboratory, with commercially available reagents, for the diagnosis of syphilis, infant diarrhea due to *Escherichia coli* 0127:B8, Group A streptococci, and rabies. The technic must be applied with care and with proper controls. Experience is required in the recognition of the yellow green color of the fluorescein staining and in the evaluation of degree of its intensity.

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It is easier for us to be wise for others than for ourselves.—LA ROCHEFOUCAULD

CYTOLOGY IN CONNECTICUT

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Practical cytological diagnosis is a youthful phase of anatomic pathology. The first edition of the "Diagnosis of Uterine Carcinoma by Vaginal Smear" by Papanicolaou and Traut was published in 1943, a historic date in the use of exfoliative cytology for diagnosis of cancer. It is true that many observers over many years had described in detail exfoliated cancer cells under many circumstances. George Papanicolaou, himself a histologic anatomist, had spent some twenty years combining and refining suitable preparations that would yield a transparent staining and provide the best visualization of nuclear and cytoplasmic detail in cellular smears. Much of his earlier effort was directed toward the hormonal changes revealed in vaginal cytology.

Working in the gynecological clinic with Dr. Herbert Traut, Papanicolaou found cancer cells in smears from patients having no clinical suggestion of cancer. Further study demonstrated early curable cancers. This was particularly true of cancers of the cervix uteri. Confirming, collecting and exploring these significant leads expanded into the historic "Atlas" published in 1954.

Mrs. Papanicolaou was the doctor's indispensable and constant assistant, technician and secretary. In later years, Dr. Traut told me that he had literally imprisoned the doctor and Mrs. Papanicolaou in his own home in order to have them complete the original monograph. Papanicolaou at once recognized the imperfections, hazards, pitfalls and errors inherent in the method and the difficulties of giving to others the experience so necessary for correct interpretation. In was for these sound reasons that he had delayed for several years his publication and gave us the dictum that no definitive treatment should be based on cytology alone, but only when confirmed by formal biopsy or other confirmation.

During the decade of the forties, many workers throughout the United States and Europe confirmed Papanicolaou's work. In the Northeast the contributions of Ruth Graham, Ernest Ayre and Olive Gates were noteworthy and the exfoliative cytology method was extended beyond the female genital tract by many investigators. The most successful applications were to the respiratory and urinary tract. The stomach, rectum, prostate and other organ systems were studied and described from a cytological point of view. Frequently in these other systems cytology served as a supporting diagnostic aid, but none provided the early detection potentialities of the original exfoliative vaginal cytology with its high yield of curable cases and its simplicity of sampling.

The Connecticut Division of the American Cancer Society undertook its first major fund raising effort in 1945. The success of this effort permitted the Cancer Society to provide a substantial grant to the Hartford Chapter to explore the detection possibilities in this promising technique. The following year a similar grant was made to the New Haven Chapter. It at once became obvious that an extensive experience with careful follow-up was necessary if a reasonable degree of accuracy was to be attained. This remains a truism fifteen years later.

In the next few years, these two pilot laboratories in Hartford and New Haven reconfirmed the detection value of exfoliative cytology for early cervical carcinoma while Dr. Averill Liebow contributed significantly to its diagnostic value in pulmonary malignancy. It was also promptly demonstrated that with increasing volume it was necessary to train an adequate number of cytotechnologists who would screen the slides for the supervising physician in the same manner that medical technicians screen hematology smears or sputum examinations for tubercle bacilli for the clinical pathologist.

By 1950, the method, now affectionately dubbed the "Pappy Smear", had proven its value in the two pilot laboratories of the state. The enthusiastic praise in newspapers and lay journals created increasing demands for the test in doctors' offices throughout Connecticut. The vaginal cytology examinations gradually became a self-supporting service in several areas. Increasing requests through the state for the service converted the previous subsidy grants by the Connecticut Cancer Society into cytotechnologist training grants at the same two laboratories. Up until the present time, forty-six cytotechnologists have been trained at the Hartford laboratory, almost all of whom have been employed in hospital laboratories within the state. Still others have been trained in New Haven and some working within the state have been trained in out-of-state centers. Last year thirty-eight full-time and eleven part-time technicians were working in this field and at least thirty hospital laboratories were furnishing this facility.

In the latter part of the 30's, Walter Schiller popularized the "Schiller line", the abrupt change from the normal to the abnormal epithelium adjacent to many cervical carcinomas and variously called carcinoma-in-situ, intra-epithelial carcinoma, non-invasive carcinoma, precancerous metaplasia, and so on. The controversy that these terms engendered became greatly augmented as confirmation of abnormal cytology findings was sought in more frequent and more complete biopsy sampling. These diagnoses increased geometrically as cytology service expanded and carcinoma-in-situ is now a common diagnosis in contrast to twenty-five years ago.

Pathologists have been forced to rearrange their teaching in histopathology, brought about by cytology. As our experience in cytology expands, we have learned to look more closely at the individual cell structure than was formerly taught in histology training. The intimate nuclear detail becomes the most important element. Fortunately, these changes can be better observed in the average individual cell in smear preparation than they can in the usual histological specimen. Less distortion and fewer artefacts of fixation, dehydration and so on are present to cloud the careful examination. In spite of the high degree of accuracy of the method, conscientious workers in the field do not recommend therapy on smear diagnosis alone. The rule laid down by Papanicolaou originally, that all positive or questionably positive reports must be confirmed by formal biopsy, is a principle that has consistently been followed by all laboratories.

The method of reporting cytology smear examination advocated by Papanicolaou, namely Negative, Class one or two; Doubtful, Class three and Positive, Class four and five, has led to some confusion. It becomes quite simple when it is understood that the classes indicate the degree of conviction and in no way imply the grade of malignancy or the extent of the disease. No biological report is absolute and gray zones of some degree are usually present. It is to indicate the degree of grayness that the five classes are used. Certain laboratories insist on a positive or negative report and this would be ideal, but even these laboratories hide behind such terms as "probably", "possibly", "indeterminate", "deferred" or other semanticisms. For the referring physician, therefore, it is imperative to understand the terms employed by the laboratory on which he relies for this service.

A frequently recurring question is "How accurate is vaginal cytology?" In so far as false negatives are concerned, a firm answer is difficult to come by. Certain it is that the most frequent cause is inadequate sampling. Douching, jellies, trauma are often the reasons found. Positive errors are much better documented and experienced laboratories range from 90 to 95 percent accuracy in cervical carcinomas and somewhat lower figures for fundal. It can be noted that for early cervical lesions, the cervical scraping sampling is superior to the vaginal pool while for the fundal lesion the reverse is true.

A second recurring question is "What do you do with a Class three Doubtful report?" In our laboratory, primary Class three reports usually are accompanied by a short note attempting to indicate whether we lean to the positive or negative side. About one-third ultimately are proven cancers, so that follow-up study is indicated within a reasonable period of time, that is, from three to six months. Special care should be taken to obtain an adequate specimen. With antenatal examinations, the repeat smear can be delayed until six weeks postpartum unless cervical findings warrant other measures. Even with a Class four a similar delay can be amply justified. If only a single sampling is planned during a pregnancy, our experience has been that the postpartum specimen is the most productive and accurate.

In any discussion of vaginal exfoliative cytology, a word concerning RR and SR is in order. In 1947 Ruth Graham at the Vincent Memorial Laboratory startled the cervical cancer therapists by an article indicating a prognostic accuracy of 88% in treatment based upon the radiation response or RR determined by vaginal exfoliative cytology. Those patients showing certain cellular changes during radiation therapy would do well even in League of Nations Stage three, while those not showing these changes would do well if adequate surgery replaced radiation treatment. The potential value of such prognostications can scarcely be over emphasized. In subsequent studies, the Grahams presented other cellular changes in the pretreatment smear known as the sensitization response or SR. Accordingly one could determine before therapy was instituted whether radiation or surgery would yield the higher control rate. Unfortunately, many of the criteria presented and published were subjective rather than objective and too often variations in time of sampling and importance of this or that factor made confirmation by other investigators extremely difficult. Suffice it to say that no one in this country, in spite of many laborious attempts, has been able to confirm her observations during the subsequent 10-15 years. Furthermore, the Grahams have lately abandoned the subject and are pursuing studies based on immunity. It is apparent, therefore, that RR and SR evaluation should be considered as a special, specific, comprehensive study.

What can be said of exfoliative cytology in the detection or confirmation of uterine cancer? There have been numerous extensive surveys in all parts of the country and the striking findings are the uniformly satisfactory and similar results. The results of the study of 90,000 patients over a ten year period by Elizabeth Wheeler, at Hartford Hospital, will serve as an example. In this study, there were 745 cases of cancer confirmed by histological examination. While many were clinically recognized or suspected, there were 471 cases (an incidence of 52%) which according to the examining physician, would have gone undetected at that time except for the cytology findings. Many of these cases were stage O, carcinoma-in-situ; 43% showed active invasive cancer yet the majority of these were early and curable.

To project these findings to the entire state is a goal that should be the responsibility of all physicians. Already over thirty hospital laboratories with the trained personnel are available for this service and it remains only to expand and extend their use. As of 1956, reports of the Cancer division of the State Department of Health show a significant decline in deaths from cancer of the cervix and perhaps cytology has played a part.

Little has been said concerning cytology in other than the female genital system. Although it is applicable to other organ systems as a diagnostic assistant, cytology in its present stage of development does not lend itself to the easy, simple detection phase in these other systems. Perhaps as more experience is attained, suitable techniques may be forthcoming. The record in vaginal cytology alone, however, is sufficiently significant to give it a valued place in cancer control.

SUMMARY

1. Exfoliative cytology is a useful method of demonstrating cancer cells.
2. Vaginal cytology is a simple, accurate method of detection of uterine cancer in an early curable stage.
3. Radiation response (RR) and sensitization response (SR), proposed to give prognosis and indicating type of therapy, is entirely lacking confirmation.

"This bracing discipline was as badly needed in the laboratories as in the wards; and from both sides came signs of shivering discomfort, as an early reaction to the cold jet of statistical reason. It must indeed have been painful to a mind proudly reliant on the experience of half a lifetime to submit to the imposition of control experiments and statistical evaluation of results as a protection against an unconscious bias of its judgement."

"Quietly but irresistibly, it seems to me, statistical methods and principles have been exercising and establishing their corrective influence, substituting a numerical measure of the evidential significance of data obtained in ward or laboratory, whether from opportunist observations or deliberately planned experiments, for the vague and speculative methods of appraisement which formerly prevailed."—Sir Henry Dale, *The Scientific Basis of Medicine,* 1950.

PERCUTANEOUS NEEDLE BIOPSY OF THE KIDNEY

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The study of medical kidney diseases has been difficult for a number of reasons: their onset is often insidious, their course usually extends over many years and symptoms and abnormalities of function are non-specific. In addition, even when the presence of renal disease is recognized early, the methods of study have been indirect (X-ray appearance of the kidneys, chemical and cellular constituents of the urine and renal function). Histologic data were obtained mainly late in the disease when the events leading to the end stage could be reconstructed only by speculation. So it is that little is known of pathogenesis and early pathology of renal diseases and their correlation with clinical phenomena.

The recent advent of percutaneous needle biopsy has provided a method whereby morphologic and histochemical changes taking place in the kidney can be observed during stages of disease rarely seen at the autopsy table. Thus the correlation of histologic abnormalities, clinical observations and the effects of therapy is greatly facilitated. In addition to providing data that will in time benefit all patients with renal disease, there are many instances where biopsy is of immediate help in management.

INDICATIONS.

General—

1. *As a definitive diagnostic procedure.* A specific histologic diagnosis often eliminates the need for diagnostic procedures such as cystoscopy, retrograde pyelography, etc.

2. *In evaluating the need for hemodialysis.* It is important in managing patients with acute anuria to know the extent of renal damage. The finding of viable-looking tissue by renal biopsy can be important evidence for the continued use of the artificial kidney.

3. *Medico-legal problems.* Occasionally, a patient will first be told of an abnormal urinalysis following trauma. The demonstration of diffuse renal disease by biopsy can cast serious doubt on trauma as a causative factor.

4. *Determination of prognosis.* At present, the prognostic value of biopsy in many renal diseases is uncertain. Information is continuously accumulating in this area, however, and undoubtedly much more will be learned. Although there may be no benefit to the patient for the moment, knowledge of the histologic changes at an early stage may be of great value in management in later years.

Specific Problems of Disease.

1. *Nephrotic syndrome.* Kidney biopsy prior to therapy of the nephrotic syndrome may make it possible to predict the value of corticoid therapy according to specific histologic features. Also, it is possible to determine the presence of diabetic glomerulosclerosis (Kimmelstiel-Wilson lesions) or amyloidosis; neither are benefited by steroids and they may even represent contraindications to such therapy.

2. *Abnormal findings on urinalysis.* Renal biopsy in patients with albuminuria of undetermined etiology frequently reveals changes indistinguishable from those seen in patients with the nephrotic syndrome. One of the questions that has been raised is whether corticoid therapy should be instituted in these instances. Treatment at this stage of disease could conceivably be more effective than after the appearance of the nephrotic syndrome (massive proteinuria, hypoalbuminuria, edema, hyperlipemia).

When albuminuria and abnormal cellular elements are found in the urine, renal biopsy may reveal a disease amenable to specific therapy (nephrocalcinosis, uric acid deposits) and at the same time eliminate the need for further diagnostic procedures.

3. *"Hypersensitivity diseases".* The diagnosis of periarteritis or lupus erythematosus is often suspected despite negative results of muscle biopsy,

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and serologic studies. In these instances renal biopsy, even when urinalysis or renal function are normal, may reveal diagnostic vascular or glomerular lesions.

DIAGNOSTIC VALIDITY OF THE SAMPLE.

The validity of renal biopsy depends on the accuracy with which one can relate the changes seen in the tiny specimen to the changes taking place throughout both kidneys. To test this accuracy the kidneys of patients dying with a diagnosis of renal disease were biopsied at the autopsy table. Microscopic sections of the biopsies were studied without knowledge of their source. The large autopsy sections (at least one from each kidney) were studied similarly and the diagnoses of biopsy and autopsy specimens compared. The results are shown in Table I. It is evident that renal biopsy is remarkably accurate in the diagnosis of diffuse bilateral renal diseases. However, in focal diseases such as infarction, tuberculosis, carcinoma and chronic pyelonephritis an accurate diagnosis is dependent on chance. Furthermore, even if a representative focal lesion is obtained it is impossible by this technique to determine its extent.

TECHNIQUE OF BIOPSY.

The techniques for biopsy have been described by many investigators and will not be discussed in detail here. The procedure is carried out in bed with the patient in the prone position with 2 pillows beneath his abdomen. Local anesthesia is employed and discomfort is minimal.

Table I
The Diagnostic Accuracy of Needle Biopsy of the Kidney as Determined at Autopsy

13/13	membranous (chronic) glomerulonephritis
5/5	focal calcification
20/20	arteriosclerotic nephritis
3/3	amyloid
2/2	sulfonamide crystals
7/7	subacute glomerulonephritis
5/5	focal embolic nephritis
10/10	tubular atrophy
5/5	hemosiderin in tubular epithelium
38/38	normal
1/5	arteriolonecrotic nephritis (malignant hypertension)
22/24	arteriolosclerotic nephritis
0/2	metastatic carcinoma
16/18	Kimmelstiel-Wilson lesion
2/8	infarct
2/7	miliary tuberculosis
4/8	tubular necrosis
6/20	chronic pyelonephritis
0/1	leukemia

The fractions inciate the number of correct biopsy diagnoses over the number of specimens examined.

RESULTS.

Specimens suitable for interpretation are obtained about 80% of the time.

COMPLICATIONS.

In most instances, the period after renal biopsy is uneventful, the patient experiencing no discomfort. Some patients will have soreness on the side of biopsy but this usually abates within 24 hours. Rarely, a patient will have renal colic due to the passage of a blood clot. This complication occurred 2.8% of the time in one series of 500 biopsies.

Microscopic hematuria, as one would expect, occurs most of the time. Sometimes (5-8%) there is gross hematuria. The hematuria resulting from biopsy, as a rule, disappears by the end of the first post-biopsy day.

Occasionally there is bleeding into the perirenal tissues and in 1000 biopsies reported in the literature transfusion of blood was required in 0.5 to 2.2% of cases.

Sporadic reports of severe bleeding following biopsy have appeared. Kark has stated recently, however, that he, Dr. Brun and Dr. Schreiner, have together performed "nearly 2000 biopsies without one death and with less than 10 per cent morbidity of a minor kind".

CONTRAINDICATIONS.

1. *Single functioning kidney.* If most or all of the functioning renal tissue is located in a single kidney, this kidney should not be biopsied. The opposite kidney, if there is one, may be biopsied.

2. *Bleeding tendency.* When there is a history or objective evidence of a bleeding tendency biopsy should not be attempted.

3. *Poor patient cooperation.* The patient is required to cooperate during the biopsy procedure. It is most important that he be able to hold his breath on command. If it is not possible to obtain cooperation general anesthesia may be employed. However, if general anesthesia is to be used consideration should be given to open surgical biopsy, particularly in infants where the kidney is readily accessible.

4. *Tumor, cyst, abscess, hydronephrosis.* These conditions, although not absolute contraindications to biopsy, should be thoroughly investigated by the urological surgeon and in most instances managed by them.

PRECAUTIONS TO BE TAKEN.

Before Biopsy. It must be emphasized that renal biopsy is undertaken only after the patient has undergone a complete *detailed history and physical examination* and the usual studies for the evaluation of renal disease. In addition, it is mandatory that tests of *blood clotting* be performed (bleeding time, clotting time, prothrombin time, clot retraction). An *intravenous pyelogram* is necessary to establish that both kidneys function and to indicate their size and position. As a precautionary measure 2 pints of *blood* are cross-matched and held. A *permit for operation* should be obtained.

It is essential that the nature of the procedure be explained to the patient. Often, the discomfort experienced is related to anxiety due to ignorance of the procedure. A short explanation accompanied by reassurance is more effective than any "tranquilizer". Indications for *sedation* before the procedure will vary with the subject. Sedatives should be used sparingly since their hypotensive effects may confuse the post-biopsy interpretations of blood pressure readings.

After Biopsy. When the biopsy is completed the patient should remain in the prone position for 2-3 hours. After this he may roll over and it is customary to remain in bed for 24 hours. The blood pressure and pulse are taken every 30 minutes for 24 hours following the procedure. Examination of the abdomen during this 24 hour period will, as a rule, not reveal tenderness. The urine specimens after biopsy are examined for evidence of bleeding and a clean voided specimen is cultured. Bacilluria is tested for because of the known increase in susceptibility of the kidney to infection which has been observed in animals following insertion of a needle in the renal medulla. The patient may be discharged 36-48 hours after biopsy.

It is evident that renal biopsy is not an office procedure. Great care must be taken in selection, preparation and post-biopsy management of patients. The low morbidity which has been observed is no doubt largely due to the procedure having been done by few individuals with a sustained interest in the technique.

SUMMARY.

Percutaneous needle biopsy is of proven value in the management of diseases of the kidney. It is inevitable that data carefully gathered and evaluated will lead to a much better understanding of pathogenesis and therapy in Bright's disease.

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AUTOMATION AND LABOR-SAVING DEVICES IN THE CLINICAL LABORATORY

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Man has always been interested in creating instruments (sometimes gadgets) to perform tasks more easily, whether it be an automatic burglar catcher at home, a wind-driven machine on the farm or an automatic pipet in the laboratory. These devices share a common goal which is to make the work easier and the result better. Laboratory personnel often have been ingenious with labor-saving devices but limited in their technical abilities and mechanical facilities to create sufficiently sophisticated tools to meet their basic needs.

Since World War II extension of medical services and the use of more laboratory procedures per patient put demands upon unreasonably small and insufficiently staffed hospital laboratories. A number of technically minded men applied their skills in electronics, mechanics, optics, and glass working and produced an abundance of colorimeters, spectrophotometers, pH meters and other previously hard to get instruments. Photoelectric colorimeters selling for less than $200 virtually replaced the visual colorimeters and provided greater accuracy and efficiency in the laboratory and allowed technologists to do more and better work per unit of time. Skeggs[1] in 1957 devised "An automatic method for colorimetric analysis" using an ingenious pumping device to measure blood and reagents into his machine. Where necessary, the machine separated glucose, urea or other chemicals by dialysis in order to avoid making a protein-free filtrate. These samples were allowed to react with special reagents enroute to the automatic colorimeter. Readings were automatically drawn on an electronic recorder. These readings applied to a standard curve provided the final analytical result. The continuous, consistent and accurate functioning of the machine brought wide and rapid acceptance in numerous industries, medical research and clinical laboratories. Many laboratories claim their technologists can load in the blood samples for glucose or urea and are then free to go to their other duties while the machine works, thereby easing the performance of the daily work load. Hospital directors sensing the laboratory pressure appear to be able to find $5000 per machine (Autoanalyzer) although prior to this time many could hardly find a few hundred dollars for essential pH meters and other instruments.

The Autoanalyzer described above has played a valuable role in many laboratories, large and small. It is applied to measure many simple constituents such as chloride, bicarbonate, creatinine and phosphate. The measurement of enzymes in blood such as the phosphatases, cholinesterase, phosphohexase isomerase and so on have been automated. In 1958, Cotlove, Trantham, and Bowman[2] introduced their "Chloridimeter". In this system (Figure 1), the operator using an automatic pipet[3] introduces 0.1 ml. of serum (equivalent to 2 drops) and a supporting electrolyte into a vial and places it in the instrument. When started, it automatically titrates chloride in the serum, stops the titration at the end point and provides numbers on a dial which are proportional to the chloride concentration in one minute. This semi-automatic instrument, at one-tenth the price and the size of the Autoanalyzer, can do one specific task on small amounts of serum more accurately than the larger machine.

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A flame photometer with automatic servo-null device (Figure 2) has been made[3] and used which prints out the final analytical result for the sodium and potassium content of a drop of serum in less than a minute. Such a device points to the current trend to make the instrument do all or part of the analysis including the calculation and the printing of the result. Undoubtedly, instruments such as this and colorimeters will be made within the next 5 years which will feed their results into

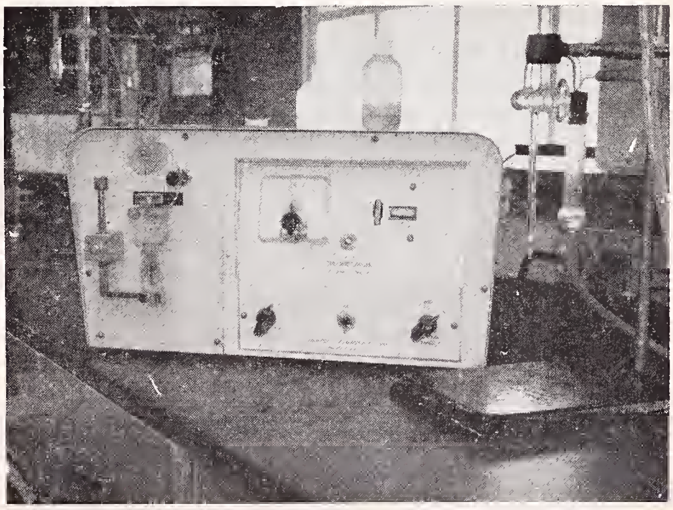


FIGURE 1
"Chloridimeter" and automatic pipet. (See text.)

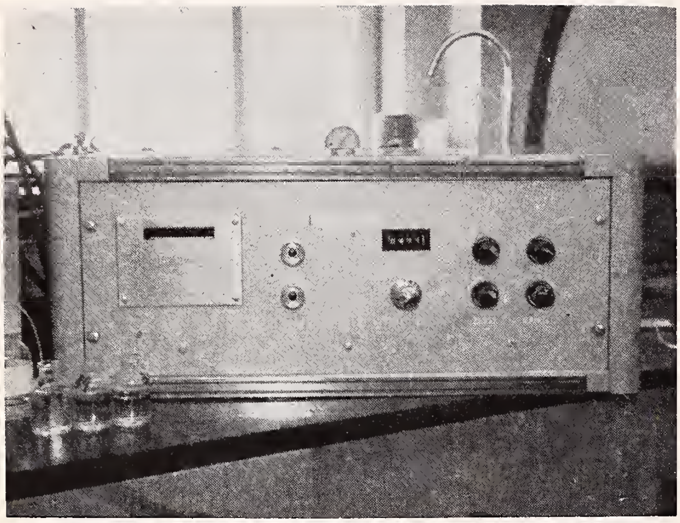
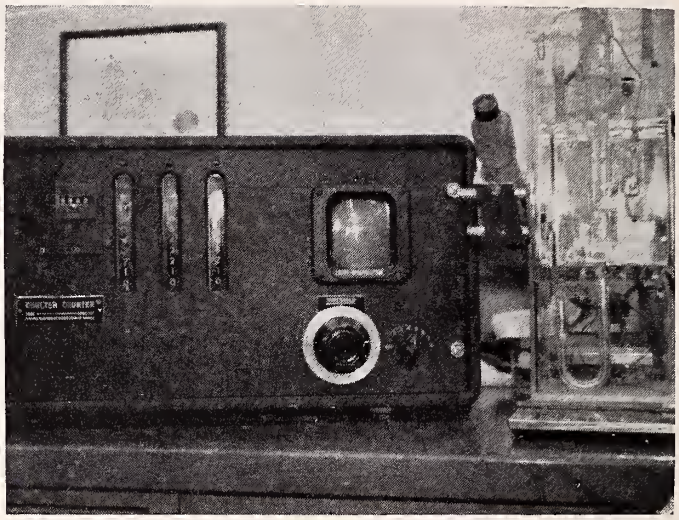


FIGURE 2

Automatic null-balance device which is attached to flame photometer. This instrument automatically presents the final result for sodium or potassiumon on the dial and prints the result on tape.



FIRURE 3

Coulter automatic electronic particle counter used for counting leukocytes and erythrocytes and for the sizing of the latter. The final result appears on the counter.

electronic computers so that the final result will become part of an electronic record of each patient and thereby eliminate paper reports.

An electronic particle counter designed by Coulter (Figure 3) was almost immediately demonstrated[4,5] to be the most accurate and rapid device for counting red and white cells in blood. Again, the struggling laboratory found it could not do without this expensive ($4000) and indispensable instrument. When properly used, it can measure red cells to within 3 per cent and can even determine the size of the red cell population (s).

In our laboratory, we have been attempting to use semi-automatic equipment in preference to the bigger and more automatic one. A system of microchemistry[6] (0.1 ml. samples) has been devised using automatic pipets, simple colorimeters (one for each job), bottles, special racks and so on to carry small samples through the analytical process to the final result including the cleaning of equipment. Some advantages have been accuracy, efficiency, convenience and use of small samples.

Automation or work simplification cannot solve some major problems of the clinical pathology laboratory. While it is helpful indeed to use automatic instruments to turn out good results for glucose, urea and a few enzymes, the ever increasing need for more complicated but essential tests cannot be completely met by machines. An occasional demand for barbiturate, alcohol, quinidine, copper, catechol amines, serotonin, steroids and so on must be performed by specially skilled chemists or technologists. The need for analytical procedures using small samples or those designed for emergency work is not easily met by machines. The counting of red cells and white cells is a great innovation but the traditional differential count on a peripheral smear can only be performed individually and slowly by a skilled technologist. Clever technics have been devised for culturing and antibiotic sensitivity testing of microorganisms, however, the production of phage for typing of 80/81 staphylocci requires considerable art. Searching for acid-fast bacilli is a hard, technical task.

The clinical laboratory is working on a constantly increasing load of approximately 16 per cent per year which it cannot easily meet. Automatic machines and work simplification reduce the anxiety and tension of the technologists so that more and better work can be accomplished with less effort. Some of the problems will be solved by sending some of the specialized tests to well-qualified reference laboratories, by hiring more specialized personnel, by acquiring more space and having it better equipped, and by adding new and specialized tools and methods as they appear.

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ENZYME DETERMINATIONS IN THE DIAGNOSIS OF DISEASE

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"Life depends on a complex network of chemical reaction brought about by specific enzymes, and any modification of the enzyme patterns may have far-reaching consequences for the living organism." This introductory remark from *Enzymes* by Dixon and Webb clearly emphasizes the importance of enzymes.[1] The rapid advances in enzyme chemistry have helped to clarify the molecular basis of metabolism, heredity and many diseases. The application of enzyme measurements to the diagnosis of human ills has become progressively more frequent. However, the number of enzymes, plus the variety of sources and methods employed to measure activity has made the correlation and substantiation of the clinical value of these determinations difficult. It is the purpose of this paper to enumerate and discuss, rather arbitrarily, those enzyme measurements which the laboratory of a community hospital might justifiably perform because of their *established* diagnostic or prognostic value.

THE TRADITIONAL SERUM ENZYMES

Serum amylase, acid phosphatase and alkaline phosphatase have been the subjects of repeated chemical and clinical investigations which have been comprehensively reviewed in the excellent papers of a recent symposium on diagnostic enzymology.[2] Despite a multiplicity of methods with varying ranges or normal activity, these basic enzyme determinations are well established as routine laboratory procedures. The clinical use and interpretation of these tests is well known; however a few esoteric yet intriguing facts about each of these enzymes seems worthy of presentation.

Pancreatic and salivary amylases migrate with gamma globulin on starch gel electrophoresis, but normal serum amylase moves predominately with albumin.[3] This observation together with the fact that normal amylase levels are maintained after pancreatic or salivary gland removal indicates that the major portion of amylase in the serum is from other tissues. Normal serum amylase originates predominately from the liver with lesser amounts coming from muscles and possibly from body fats and the Fallopian tubes. The low serum amylase levels often associated with severe liver disease is probably due to the absence of the hepatic amylase component.

In like manner, the serum alkaline phosphatase which is usually thought to originate almost totally from bone has been separated into three fractions.[4] Those associated with the alpha-1 and alpha-2 globulin fractions of serum are observed during obstructive or inflammatory liver diseases and are readily separated on starch gels from those associated with the beta-globulin fractions which are of osseous origin. If these findings are substantiated, the relatively straight forward explanations of (a) osseous production, (b) serum transport and (c) hepatobiliary excretion may well require modification. The repeated demonstration of low alkaline phosphatase activity must no longer be dismissed as inconsequential or merely "laboratory error". The hereditary deficiency of alkaline phosphatase, hypophosphotasia, although usually asymptomatic may present as Vitamin D resistent rickets in the infant or be associated with failure to heal fractures in the adult.[5]

Perhaps the best known efforts to pin-point the tissue source of a serum enzyme have been with acid phosphatase. There are several serum acid phosphatases which originate from liver, erythrocytes, platelets and probably bone as well as the prostate. It is possible by adding tartrate, ethanol, formaldehyde or copper to inhibit one or several of these serum acid phosphatase fractions. The efficacy of these biochemical inhibition procedures is still actively debated and none seems to have gained uniform acceptance. However, no matter which method is employed, it is important to avoid collecting samples for the acid phosphatase determination for twenty-four hours after digital, catheter or instrumental manipulations of the prostate.[6] The false positive results obtained if this precaution is not observed will undoubtedly confuse rather than aid in the clinical interpretations.

ENZYMES OF INTERMEDIARY METABOLISM:

Many intracellular enzymes of the glycolytic, urea and critic acid pathways are normally found in the serum. The serum glutamic oxaloacetic transaminase (SGOT), glutamic pyruvic transaminase (SGPT), lactic dehydrogenase (LDH), malic dehydrogenase (MDH), isocitric dehydrogenase (ICD), phosphohexose isomerase (PHI), aldolase, arginase, ornithine carbamyl transferase and many other enzymes show marked increases in activity with muscle injury, liver damage, and carcinoma. Although most of these enzymes may be of value in specific investigations, i.e., aldolase measurements to study the muscular dystrophies, most of them have not become established clinical laboratory procedures. However, a surprisingly short time after the initial papers on the transaminases and lactic dehydrogenase had appeared, numerous investigations had clearly substantiated their clinical value.

A recent publication by Hamolsky and Kaplan lucidly reviews the significance of enzyme measurements in myocardial infarctions.[7] These and other authors suggest that LDH is the enzyme of choice over SGOT, MDH, aldolase or ceruloplasmin in studying suspected myocardial infarctions. In the near future it may be clinically feasible to identify the tissue of origin of an abnormal LDH by electrophoretic techniques[8] or the use of analogues of DPN[9]. The significance of secondary LDH and SGOT rises during cardiac infarction is not altogether clear. Some undoubtedly represent the so-called "extension of the infarction" but many of these secondary elevations are due to hemolysis, drug therapy or the liver injury resulting from hypotension. The serum transaminases, LDH, ICD, and several other enzymes can be elevated to as much as fifty to over one hundred times the normal mean activity by the central lobular liver cell necrosis which follows profound shock of a myocardial infarction.[10]

The SGP and SGO transaminases are clearly of greatest usefulness in the study of parenchymal diseases of the liver and should be considered basic laboratory tests for the evaluation of these disorders. In fact, the combined use of these transaminases and alkaline phosphatase is sometimes the only laboratory data required to delineate the cause of a hyperbilirubinemia. However, one must not overlook the fact that obstruction of either common duct or intrahepatic radicals results in transaminase elevations which occasionally approach those seen in the parenchymal inflammatory, toxic or necrotic liver diseases.

ENZYMES OF DIGESTION:

Many of the exocrine enzymes of digestion are found in the serum. With the notable exception of amylase and lipase, their measurement in serum has been either technically unsatisfactory i.e. trypsin in serum, or of dubious clinical value. Serum leucine aminopeptidase (SLAP) has been advocated as a definitive test for carcinoma of the pancreas; yet, in this laboratory, six of thirty-six sera from patients with histologically proven pancreatic carcinomas had normal activities prior to operation. Although this test is a relatively sensitive test of liver injury, it rarely helps to differentiate between the various etiologic causes of hepatic disease.[11]

The measurement of amylase activity and bicarbonate content together with cytologic examinations of the duodenal juices obtained through double lumen tubes after secretin-pancreozymin stimulation is a more definitive diagnostic procedure in the differentiation of disorders of the pancreas.[12] The diagnosis of fibrocystic disease of the pancreas may be substantiated by several negative stool trypsin determinations in infants, but the concentration of sodium or chloride in the sweat is a more definitive test.

MISCELLANEOUS SERUM ENZYMES:

Ceruloplasmin (copper oxidase) is closely linked with copper transport and metabolism in the body. It is one of the few proteins with enzymatic activity which has been isolated from human blood in relatively large amounts since it constitutes approximately 0.5% of normal serum protein. Ceruloplasmin levels are usually low in patients with hepatolenticular degeneration (Wilson's Disease) by both the oxidation and immunologic procedures. The availability of ceruloplasmin assays in a hospital with active pediatric and neurologic services is desirable to differentiate this inborn error of metabolism from the many other neurologic, hepatic and renal disorders which it may mimic. Fortunately, a reliable, simple enzymatic oxidation method is available.[13]

Serum cholinesterase (pseudocholinesterase) activity is reliably measured by any one of several colorimetric or potentiometric methods. The finding of a depressed serum cholinesterase activity helps to substantiate a diagnosis of liver disease if lowered activity due to chemical poisonings from insecticides and nerve gases, malignant diseases and a rare hereditary deficit can be excluded. Since this enzyme is synthesized solely by the liver it serves as a sensitive liver function test. A steady decline in activity indicates a grave prognosis. Cholinesterase depressions have also been reported in the presence of carcinomas.[14]

RED AND WHITE CELL ENZYMES:

The ease of procuring the cellular elements of blood has made the red cells, white cells and even the platelets popular targets for enzyme analyses. The estimation of alkaline phosphatase levels in properly stained, mature polymorphonuclear leukocytes can frequently be significant. The low or absent levels of alkaline phosphatase in chronic myelogenous leukemia frequently will help to differentiate this dyscrasia from the leukemoid reactions of polycythemia vera, infections and myeloid metaplasia. The normal levels seen in secondary polycythemia may also be used to differentiate it from primary polycythemia vera.

The mature red cell contains chiefly the glycolytic enzymes of the Embden-Myerhof, pentose phosphate and citric acid cycles in order to metabolize glucose. Although many of these enzymes have been studied in various anemic states, little useful clinical information has been obtained except in the drug or food induced hemolytic anemias which are clearly the result of an absent or reduced level of erythrocyte glucose-6-phosphate dehydrogenase.[15] Since this is a TPN dependent enzyme, it is relatively easy to measure, especially for the laboratory employing the spectrophotometric transaminase or lactic dehydrogenase procedures.

Although even on a large pediatric service the problem of diagnosing galactosemia in infants is rare, the clinical diagnosis can be quickly substantiated even in the newborn by demonstrating the absence of erythrocyte galactose-1-phosphate-uridyl transferase.[16] Test procedures similar to the latter will undoubtedly represent an ever increasing proportion of the clinical laboratory's efforts since the diagnosis and subsequent therapy of many hereditary diseases rests squarely upon the demonstration of a characteristic molecular anomaly.

ENZYMES AS DIAGNOSTIC REAGENTS:

The specificity of an enzyme for only one substrate or a limited group of similar substrates allows complex mixtures of body fluids to be analyzed for a single chemical constituent without prior separation, extraction or isolation procedures. Urease which selectively splits off ammonia from urea has been employed for many years in the traditional blood urea nitrogen methods. Uricase is utilized in some laboratories because the specificity of this enzyme for uric acid permits accurate uric acid determinations in the presence of high concentrations of other reducing substances. Beta glucuronidase hydrolyzes urine steroids in an indispensable step prior to chromographic analysis since hydrolysis by strong acids, alkalis and heat would alter the characteristic side chains of many steroids.

The utilization of enzymes as reagents is certain to increase. We can expect many varied and novel applications such as the urease impregnated papers for office BUN estimations or the familiar enzyme-containing "dip-stick" papers for urine glucose identification. Ultra-micro chemical analyses employing enzymes have made it possible to measure blood alcohol in 0.10 ml of a 1:100 dilution of serum even in the presence of other alcohol and blood ketones. Similarly, another micro procedure performed with the aid of a glucose-oxidase-perioxidase-ortho-dianisidine system permits quantitative measurements of blood glucose directly on .020 ml of serum without prior protein precipitation.[17]

SUMMARY

Some of the enzymatic determinations which have clearly established value in the diagnosis of disease have been enumerated. Those biochemical efforts directed towards obtaining greater organ specificity of serum enzymes have been mentioned. The utilization of enzymes as analytical reagents will undoubtedly increase in a variety of novel ways. Certain tests for enzyme deficiency are so specific in the diagnosis of disease that they must be made generally available.

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Editorials

A Career In Medicine

An indication of the striking decrease in the number of qualified young men and women interested in becoming physicians was a meeting held recently at Columbia University. It was a "Careers Day in Medicine" sponsored by the Medical Society of the County of New York.

Such a conference ten years ago would have been unheard of. True, our colleges and high schools have long had career days in which medicine was discussed, along with the other professions and vocations. This conference however, was admittedly aimed at recruiting high school seniors and college undergraduates.

In opening the meeting, Dr. Bernard J. Pisani, president of the Medical Society of the County of New York said frankly: "The society decided to sponsor a Careers Day because of the dwindling number and lower quality of students applying for admission to the nation's medical schools."

The deans of medical schools formerly were kept busy this time of the year explaining to irate parents and alumni why their children and friends had not been admitted. Yesterday, four medical school deans shared the rostrum, "selling" medicine as a career.

The shortage of medical school candidates was underscored last week by spot announcements on radio in which opportunities in medicine were outlined. The announcements even stated an "A" average was not necessary; those in the middle of the class, scholastically were urged to apply.

A few years ago the majority of medical school applicants had "A" or high "B" averages as undergraduates. Now about one-sixth have "A" or "C" averages and the remainder "B" averages. Since 1956, the number of medical school applicants has dropped steadily. In 1947, nearly 7 per cent of all college graduates applied to medical schools, compared to 4 per cent in 1958.

A number of factors are involved in the reduced number of applicants to medical schools, but all have the common denominator of money.

Although medical school costs climbed sharply immediately after World War II, G.I. education rights eliminated the financial barriers for many qualified veterans. Several medical school deans have commented that the number of well-qualified applicants reached a peak when these benefits were available to veterans of World War II and the Korean conflict.

Based on a survey of 4,899 seniors from the 1959 medical school graduating classes, the Association of American Medical Colleges reported the following to its membership last fall:

Ignoring the required minimum of one year's interneship, two years' liability for military service, and the possibility of three more years of residency training after graduation, the Doctor of Medicine degree costs approximately twice as much as a Doctor of Philosophy degree.

The average cost to the medical student of his tuition, fees, books and related expenses is about $1,000 a year or $4,000 for the four years. Costs in private schools are higher than the average and those in most state schools are lower. Comparable costs to the Ph.D. candidate who spends four years in obtaining a degree average $450 a year, or a total of $1,800.

Approximately 50 per cent of all medical students and 61 per cent of all Ph.D. candidates receive income from stipends, fellowships and similar sources.

The average medical student received $500 a year from such sources, the average Ph.D. candidate receives approximately $2,000 a year.

Both medical students and Ph.D. candidates usually come from upper-middle or high-income families; 84 per cent of medical students got financial help from their families, compared to 22 per cent of all graduate students. Many Ph.D. candidates explained that with $2,000 a year available in stipends and fellowships, they didn't need help from their families.

Forty-three per cent of medical students borrowed to help meet educational costs, compared to 9 per cen of other graduate students. The average debt of medical students was 1.5 times that of other graduate students.

President Kennedy's proposal for Federal scholarships for "talented medical and dental students in need of financial assistance" would help. Medical educators also hope private philanthropy will follow the lead of the Avalon Foundation, which earlier this year announced grants totaling $1,100,000 to 86 medical schools.

The grants were an unrestricted supplement to the scholarship fund of each school. Total scholarship expenditures by all medical colleges in 1959-1960 were only $2,252,000.

Authorities agree that our total annual graduates, now 7,400, must be substantially increased to meet the needs of our growing population. Opening new medical schools, however, is not the answer. We must also eliminate the financial barrier of the high cost of medical education, which prevents so many qualified young men and women from choosing medicine as a career.

Howard A. Rusk, M.D.*

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Weight Gain, Serum Triglyceride And Coronary Disease

It has been repeatedly stated and universally believed that of all the factors involved in atherogenesis, the genetic factor cannot be influenced while such factors as diet, tobacco and physical activity may be. This is not altogether true since, the genetic factor may operate through agencies that are amenable to correction. We can't alter the genetic factor in diabetics, but if obesity, which is remediable, is added on, the problem becomes very difficult and if removed, the problem is often simplified. The same is probably true with coronary artery disease.

There is doubtless a gentic factor in atherogenesis, but there is also an associated high serum triglycerides in patients with coronary artery disease which may be caused by diet. Albrink et al in a study of 215 apparently healthy male factory employees between the ages of thirty and seventy found significant elevations of serum triglycerides with advancing age, obesity, family history of diabetes or coronary artery disease, on the one hand, and weight gain during adult life on the other. The mean serum triglyceride concentration of seventy-eight men who had gained less than ten pounds since age twenty-five was 4.6 m EQ/L. compared to 7.1 m EQ/L. for 137 men who had gained more than ten pounds a highly significant difference. Those who achieved a moderate degree of corpulence through weight gain during adult life, had a mean triglyceride concentration nearly twice that of men who reached young manhood with this degree of adiposity but gained no further weight during adult life.

Men with a negative family history had significantly lower serum triglyceride than those with a positive family history unless they were weight gainers and became corpulent, in which case their triglycerides rose. The authors concluded that "weight gain during adult life was the single most important factor associated with hypertriglyceridemia in "normal men".

We have known from actuarial figures that weight gain interferes with longevity. From Albrink's work it appears to do so, at least in part by causing an increase in serum triglycerides which in turn is closely correlated with coronary artery disease. The moral is clear. If you wish to help in reducing the incidence of coronary artery disease don't gain weight and if obese, bring your weight back to normal levels. L. H. N.

Effect of Weight Gain During Adult Life on Serum Triglyceride Concentrations of Normal Men. M. J. Albrink, J. W. Meigs and M. Granoff. Society for Chemical Investigation, May 1961.

On Mental Health

The long awaited report of the Joint Commission on Mental Illness and Health, a five-year study authorized by Congress in 1955 and carried out at a cost of more than $1,500,000, was made public recently.

The report, a 100,000-word volume titled "Action for Mental Health," contains findings and recommendations for a national mental health program that, if enacted by Federal and state governments, the commission stated, "will revolutionize public care of patients with major mental illness." This is the Number One medical problem in the country—more than half a million such patients are in state mental hospitals on any day, and nearly a million pass through these hospitals each year.

The joint commission is a non-governmental group created in 1955 under the leadership of the American Psychiatric Association and the American Medical Association. It is made up of forty-five members of thirty-six national organizations, representing medicine, hospitals, education, psychiatry, public and voluntary mental health groups. Dr. Kenneth E. Appel of Philadelphia, former president of the American Psychiatric Association, is president of the joint commission.

The study was authorized by the Mental Health Study Act of 1955, a joint resolution passed by Congress without a dissenting vote. Federal grants for the study, administered by the National Institute for Mental Health, totaled $1,410,600. These were supplemented by private contributions totaling $132,427.

Despite some gains in the last ten years, the report says the need for adequate facilities for humane healing treatment of the mentally ill is still "largely unmet." Referring to psychotic, or insane, patients as the core problem and unfinished business in mental health, the commission finds that:

(1) No more than 20 per cent of 277 state mental hospitals have participated in modern advances designed to make them therapeutic, rather than custodial, institutions.

(2) More than half of the patients in most state hospitals receive no active treatment of any kind designed to improve their mental condition.

(3) The outlook for the schizophrenic, the main source of the long-term accumulation of patients in state hospitals, is rather good under optimum treatment conditions. The schizophrenic, the study finds, has a one-in-five chance of spontaneous recovery without systematic treatment. Where proper psychological and social treatment is available, he has at least a three-in-five and as much as a four-in-five chance of improving sufficiently to lead a useful life in the community.

(4) Many of the patients now in state hospitals do not need to be there.

Loss of liberty and forcible detention, the report states, increases the patient's disability in a great number of cases. This type of patient, emotionally disturbed but still far from living in the dream-world of the schizophrenic, does not require hospitalization in a locked-ward state hospital, but rather should be treated in a mental health clinic.

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Live Polio Vaccine Results Reported From Russia

Community-wide immunization programs with the Sabin live poliovirus vaccine in the Soviet Union last year prevented the traditional summer increase in the disease, a preliminary report said recently.

The same report also gave proof of "high immunologic effectiveness" of three injections of the killer poliovirus Salk vaccine.

However, it pointed out that Salk immunization programs did not prevent a seasonal increase in the disease "as it was practically impossible to vaccinate 100 per cent of susceptibles with Salk vaccine for a number of reasons."

The Russian findings are contained in an article by Dr. Albert B. Sabin, Cincinnati, developer of the vaccine bearing his name, in the recent Journal of the American Medical Association.

In a brief report sent to Dr. Sabin, Professor M. P. Chumakov, director of the Moscow Institute for Poliomyelitis Research, said Sabin vaccine was administered in 1960, mostly in candy form, throughout the whole of Russia except in three regions where only Salk vaccine was used.

Some 77,475,000 persons were vaccinated with the Sabin vaccine, of whom about 72,231,000 were under 21 years of age. The mass inoculation of the population from 2 months to 20 years of age with the live vaccine usually was accomplished in one to seven days and most of the population was inoculated before July 1.

The orally-administered vaccine was "very well accepted," Chumakov said, and no complications or adverse reactions were noted.

Plans for 1961 call for the mass revaccination of the Russian population ranging in age from 2 months to 20 years with the Sabin vaccine, the Soviet researcher said.

Dr. Sabin said that careful studies conducted in Cincinnati, Czechoslovakia, and Hungary showed that "the community-wide use of oral poliomyelitis vaccine resulted in the complete elimination of *confirmed* cases of poliomyelitis."

Results obtained in Cincinnati in 1960, he said, show that under the conditions prevailing in the United States there is no need for revaccination such as is planned in Russia this year.

Dr. Sabin said Chumakov indicated that his recommendation for revaccination in Russia was based on the desire to do even more than may be necessary to achieve complete eradication of polio.

Rare Case Of Tick Paralysis Reported In Florida

A rare case of tick paralysis has been reported in Florida.

The case reported by Dr. F. W. Henderson, Lake City, Florida, in the current Journal of the American Medical Association involved a 38-year-old lumberman who was stricken after working and living in a woods for two weeks. He recovered after the ticks were removed.

The tick, a blood-sucking insect, is believed to cause paralysis by releasing a toxin which acts upon the spinal cord.

Dr. Henderson said to his knowledge there has been only one previously reported case of tick paralysis in man in Florida.

The case also is unusual, he said, because it was caused by the lone star tick which has been implicated in only one previous reported case of paralysis although the species heavily infests large areas of the south and southeastern states.

THE PRESIDENT'S PAGE

During August 1960, the Kerr-Mills Bill was enacted into law, when signed by the President of the United States and a target date for implementation was October 1960. Massachusetts during January 1961 and New York in April 1961 implemented the provisions of the Kerr-Mills Bill. Six additional states and two territories already have plans in operation. Five additional states have enacted legislation but have not submitted their plans to Health Education and Welfare Department for approval. Legislation has been proposed in nineteen other states, among which is Connecticut.

As I write these comments, the Connecticut legislature has one remaining day before adjournment must be called in accordance with the State Constitution. Two bills are before the General Assembly for consideration, one a Senate Bill and the other a House Bill. The House Bill, after being referred to Appropriations Committee, was forced out for consideration by the entire House, by a majority vote of the House. The two proposals differ mainly in three aspects—but each of these three points has a substantial influence on costs and it appears at this date that the cost of this program will be the decisive point as to whether or not we have Kerr-Mills legislation in Connecticut.

Of 242,615 persons over 65 years of age in this State, 36,814 would be considered eligible if either Connecticut Bill becomes law. In spite of the difference in the proposals the anticipated cost of each would be about the same, namely $3,700,000 per year. The Senate Bill has a provision which would compensate physicians for their services exactly as Old Age Assistance cases are now handled, and in effect would add an additional 36,000 persons to the present 14,000 now receiving free medical service in the hospital. This additional service would be offered without consultation with the profession. And undoubtedly when the plan is expanded as is the inevitable course of such welfare proposals, the medical profession could easily find its' self responsible for the free care of an additional 100,000 or more elderly persons in the State of Connecticut.

At every opportunity representatives of your Society have tried to point out to our legislators and the public the injustice contained in the Senate proposal. If, in spite of your Societys effort, the legislature passes a bill, without correcting this inequity, the medical profession in Connecticut must face up to a serious consideration of its' rights.

When the State assumes responsibility for the provision of medical care for any segment of its population the responsibility rests on all the citizens of the State to make provisions for that medical care. Singling out the physicians of the State to shoulder this burden in its entirety is patent injustice. As citizens, physicians are expected to pay their rightful share of taxes. Are we therefore, as a profession, to be doubly taxed or shall we be justly compensated for our services?

It is my hope that the Kerr-Mills Law will be implemented in Connecticut. Need I point out however the physician does not require the passage of any new legislation in order to give away his services.

Thomas M. Feeney, m.d.

FROM THE GENERAL MANAGER'S OFFICE

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DUTIES OF THE COMMITTEES OF THE SOCIETY

Standing Committees

(Appointed by the House of Delegates)

The duties of Standing Committees are outlined in the By-Laws of the Society under Article X, Section 3, as follows:

COMMITTEE ON ARRANGEMENTS

Par 1. The Committee on Arrangements shall be appointed by the component association with which the annual session of the Society is to be held. It shall provide suitable accommodation for the meeting places of the Society, and of the special sections, and of the House of Delegates, and of their respective committees. Its chairman shall report an outline of the arrangements to the General Manager for publication in the program.

COMMITTEE ON POSTGRADUATE EDUCATION

Par. 2. The Nominating Committee shall nominate to the House of Delegates each year a Committee on Postgraduate Education of not less than seven members and name its chairman. The purposes of the committee shall be to plan and make available programs of postgraduate education for members of the Society, to arrange and conduct the annual Clinical Congress of the Society and to cooperate with university and other agencies within the state for the extension of postgraduate education of physicians.

EDITORIAL BOARD OF THE JOURNAL

Par 3. The Nominating Committee shall nominate to the House of Delegates each year an Editorial Board of the Journal, consisting of not more than fifteen members. One of these shall be nominated as the Managing Editor of the Journal and he shall be a member of the Council also. One other member of the Board shall be nominated as Literary Editor of the Journal and he shall serve as Chairman of the Editorial Board. The Literary Editor, with the active participation and advice of other members of the Board, shall be responsible for the acceptance or rejection of manuscripts for publication and for their literary quality. He shall not be concerned with the business or financial aspects of the Journal, which shall be the responsibility of the Managing Editor. The remaining members of the Editorial Board shall be selected so far as feasible, to represent the major divisions of medicine, surgery, pediatrics, obstetrics and psychiatry and consideration shall be given to representation from the geographic areas of the state. In addition to the Board so nominated, the President of the Society shall serve as an ex-officio member with all rights and privileges of other members during the term of his office. The Editorial Board shall edit and publish the Connecticut State Medical Journal and shall determine its advertising policy, all in a manner to promote the best interests of medicine.

COMMITTEE ON HOSPITALS

Par 4. The Nominating Committee shall nominate annually to the House of Delegates a Committee on Hospitals to consist of not less than six members, and shall nominate the chairman thereof. This Committee shall pursue a continuing study of the relation of the medical profession to the operation of public and voluntary hospitals within this state and shall, when indicated, confer with the State Department of Health and representatives of the Connecticut Hospital Association and make recommendations to the Society.

COMMITTEE ON INDUSTRIAL HEALTH

Par. 5 The Nominating Committee shall nominate to the House of Delegates annually a Committee on Indusrial Health to consist of not less than ten members, and nominate the Chairman thereof. The function of this Committee shall be to inquire into health in industry with the purpose of making information on the subject available to the members of the Society and all other persons interested in improving health and hygiene of persons employed in industry.

COMMITTEE ON MEDICAL EDUCATION AND LICENSURE

Par. 6. At each annual meeting the Nominating Committee shall nominate to the House of Delegates a member of the Society to be proposed to the Governor of the State of Connecticut for appointment as a member of the Connecticut Medical Examining Board for a term of five years in accordance with Section 20-8 of the General Statutes of 1930 as amended. During the month of December of each year the General Manager of the Society shall prepare a statement informing the Governor of the Society's choice of a member to be appointed as a member of the Connecticut Medical Examining Board, and, after obtaining the signature of the President of the Society on this statement, it shall be delivered to the Governor. In the event of a vacancy on the Connecticut Medical Examining Board and when it is not practicable to have the choice of another member of the Society who is to be recommended to the Governor for appointment made by the House of Delegates, the President shall propose to the Governor a member of the Society for appointment. The Connecticut Medical Examining Board shall constitute the Society's Committee on

Medical Education and Licensure and the President of that Board as elected by its members shall be the Chairman of the Society's Committee. The function of the Committee on Medical Education and Licensure shall be to study the educational and legal requirements for practitioners of medicine in the State of Connecticut, to provide information for the members of the Society on these and related subjects, and, as occasion arises, to recommend to the Society amendments to the statutes regulating the practice of medicine within this state and the maintenance of a high quality of medical care in Connecticut.

PROGRAM COMMITTEE

Par. 7. The Program Committee shall consist of three members, one member of which shall be nominated annually by the Nominating Committee for election by the House of Delegates for a term of three years. The chairman of the Committee shall be the member who is serving the final year of his term of office. The duties of this Committee shall be to arrange the scientific program for the annual meeting of the Society, prepare such a program for submission to the General Manager of the Society for publication not less than two months preceding the date of the meeting.

COMMITTEE ON PUBLIC HEALTH

Par. 8. The Nominating Committee shall nominate to the House of Delegates annually, one member from each component county association and such additional members as it may determine not to exceed fifteen to be the Committee on Public Health and nominate the Chairman thereof. The Committee on Public Health shall be the representative of the Society, in all matters pertaining to public health, sanitation, the prevention of communicable diseases, maternal and infant welfare. It shall confer from time to time with the Connecticut State Health Department and other legal public health authorities in a manner mutually agreeable, and it shall inform the Society concerning matters of public health and, as occasion arises recommend for the Society's consideration desirable legal enactments to promote public health within the state.

COMMITTEE ON STATE LEGISLATION

Par. 9. Before the 15th of January of each year, the secretary of each county association, acting on behalf of the association, shall forward to the General Manager of the Society, the name of a member of the county association who is recommended to the Nominating Committee for nomination as a member of the Committee on State Legislation. In addition to these eight members, the Committee shall include the delegates to the American Medical Association and the General Manager ex-officio, who shall serve as the executive officer of the Committee. The chairman of the Committee shall be designated by the Nominating Committee. The function of this Committee shall be to review and advise the members of the Society concerning proposed state legislation pertaining to the public health, welfare and the practice of medicine. The Committee shall, as occasion arises, draft and have introduced into the General Assembly of this state, appropriate legislation for improving medical care and the public health within the state, advising the Society's legislative agent concerning the opinion of the Society on pending legislation, and supervise and direct the Society's program in the state legislative field.

COMMITTEE ON PUBLIC RELATIONS

Par. 10. The Nominating Committee shall nominate to the House of Delegates annually a Committee on Public Relations to consist of eight members and nominate the chairman thereof. The function of this Committee shall be to inquire into and pass upon such phases of public information as deal with the care of the sick and the practice of medicine, and shall endeavor to keep the people of Connecticut accurately and reliably informed concerning matters of public interest in the field of medicine. The Committee shall use its efforts to encourage cordial relations and understanding with the public press and radio, and cooperate with other committees of the Society in a program of public relations.

CANCER COORDINATING COMMITTEE

Par. 11. The Nominating Committee shall nominate to the House of Delegates annually a Cancer Coordinating Committee. The membership of this Committee shall include a chairman, one member from the cancer committee of each general hospital in Connecticut, and shall at all times include the President of the Connecticut Cancer Society and a representative of the State Department of Health. This Committee shall be governed by an Executive Committee designated by the Council, which shall include the chairman, President of the Connecticut Cancer Society, representative of the State Department of Health, and six members selected from the other membership of the Committee. The purpose of this Committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study, prevention and treatment of cancer in Connecticut, to aid and encourage the establishment and maintenance of high professional standards in the cancer clinics of the general hospitals, and to organize and promote professional education regarding cancer in Connecticut.

COMMITTEE ON PROFESSIONAL RELATIONS

Par. 12. At its semi-annual meeting in 1950 each component county medical association shall elect a past president of the association to serve on a state Committee on Professional Relations. The members so elected from the associations in the counties of Hartford, New London Windham and Middlesex shall serve until the annual meeting of these associations in 1951 at which time the Hartford, New London, Windham, and Middlesex County Associations shall elect a past president to serve on the state Committee on Professional Relations for a period of two years and such elections shall be held biennially thereafter. The members so elected from the associations in the counties of New Haven, Fairfield, Litchfield, and Tolland shall serve until the annual meetings of these county associations in 1952 at which time the New Haven, Fairfield, Litchfield, and Tolland County Associations shall elect a past president to serve on the state Committee on Professional Relations for a period of two years and such elections shall be held biennially thereafter.

No member shall be elected to serve two consecutive terms of two years each, but this restriction shall not apply to the members elected originally at the semi-annual meetings of 1950. No member of the Society who is an elected officer or a member of the Council of the State Medical Society shall be eligible for election to this Committee.

The Committee shall elect its own chairman and recorder and all sessions of the Committee shall be executive sessions and not attended by others except upon invitation of the Committee.

This Committee shall have no jurisdiction in legal actions relating to professional malpractice or negligence. The purposes of the Committee shall be (1) to hear complaints and charges against members of the Society referred to it by county medical associations and, (2) to hear appeals from decisions on charges reached by county medical associations or boards of censors of county medical associations.

When charges against members of the Society are received by the Society's Secretary, either from the public or other physicians, they will be referred at once to the secretary of a county association of which the physician complained against is a member and original jurisdiction in the complaint shall lie with that county association. If in the judgment of the appropriate committee of the county association the complaint should be heard by the state Committee on Professional Relations, it shall refer the complaint to that Committee. The member of the Committee representing the county association, to which a physician against whom charges have been brought belongs, shall not vote on the final conclusions reached by the Committee.

After a hearing during which the complainant and the physician against whom written charges have been brought shall be given an opportunity to appear, the Committee by ballot shall exonerate or impose such disciplinary action as it may deem appropriate and these disciplinary actions may include reprimand, suspension or termination of membership in the Society. The Committee, upon arrival at a decision, shall notify the physician, against whom charges have been brought (by registered mail) of its findings and disciplinary action to be taken and at the same time, file a resume of its findings and action with the secretary of the county association to which the physician belongs and with the Council of the State Medical Society. A member disciplined by the action of this Committee shall have the right of appeal to the Council before the expiration of 15 days from the receipt of the Committee's findings. In the absence of such appeal, the action of the Committee is final.

COMMITTEE ON MENTAL HEALTH

Par. 13 The term of office for members of the Committee on Mental Health shall be for four years. Beginning with the annual meeting of 1959, the Nominating Committee shall nominate to the House of Delegates a Committee on Mental Health which shall consist of not more than eight members, of whom two members shall serve one year, two members shall serve two years, two members shall serve three years and two members shall serve four years. Thereafter, at each annual meeting of the House of Delegates, two new members shall be nominated to the Committee to serve four years to replace the two members whose term expires.

The Nominating Committee shall nominate the Chairman of the Committee on Mental Health.

The Committee shall be continually informed concerning the provisions for the care of the mentally ill in the state and those addicted to the use of habit-forming drugs and alcohol with the purpose of making information on these subjects available to the members of the Society, and if indicated, to recommend and support legislation for the improvement of the care of the persons in this state so afflicted.

COMMITTEE ON THIRD PARTY PAYMENTS

Par. 14. The Nominating Committee shall nominate to the House of Delegates annually a Committee on Third Party Payments to consist of five members and nominate the chairman thereof. The function of this Committee shall be to study existing and projected systems providing payment for physicians' services by any public, private, or cooperative agency, and to advise the Society concerning them. In its operations, the Committee shall confer with representatives of such agencies and other committees of the Society having interest and responsibility in specific phases of medical care that involve payment of physicians by third party agencies.

COMMITTEE ON EYE CARE

Par. 15. The Nominating Committee shall nominate annually to the House of Delegates a Committee on Eye Care and nominate the chairman thereof. The membership of this committee shall be not more than fifteen members and shall include at least four but not more than seven members of the Executive Committee of the Eye, Ear, Nose and Throat Section and shall include the advisors from the Society to the Public Relations Committee of the American Medical Association. Section on Ophthalmology. The purpose of this committee shall be to coordinate and integrate the efforts of various agencies whose functions may include some phase of eye care, to cooperate with other committees of the Society in the eye care phases of their activities, and to cooperate with the AMA committees concerned with the promotion of eye care. The Committee shall develop and make available to members of the Society and all other persons interested in improving eye care, information on all phases of eye care. The Committee shall also, as occasion arises, recommend for the Society's consideration desirable legislative enactments to promote improvements in eye care within the state.

Committees Appointed by the Council

(Not requiring election by the House of Delegates)

COMMITTEE ON COOPERATION WITH THE YALE SCHOOL OF MEDICINE

The purpose of this committee is to continue and strengthen the historic close relationship between the Connecticut State Medical Society and the Yale University School of Medicine and to further the effectiveness of undergraduate and graduate programs of medical education.

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The purpose of this committee is to serve in an advisory capacity to the Woman's Auxiliary of the State Medical Society in matters of general policy, insofar as they relate to the program of the State Medical Society and upon request, to confer with the Auxiliary in the development of this program.

CONFERENCE COMMITTEE WITH CONNECTICUT PHARMACEUTICAL ASSOCIATION

The purpose of this committee is to provide a continuing conference group between the Connecticut State Medical Society and the Connecticut Pharmaceutical Association for the study and integration of the purposes and objectives of the common problems of the professions and medicine and pharmacy in Connecticut.

COMMITTEE ON NATIONAL LEGISLATION

The purpose of this committee is to be informed constantly concerning proposed national legislation relating to medical care and welfare. The committee shall advise the Council on details of proposed legislation in the fields of health and welfare and express its opinion, with appropriate approval, to Connecticut Representatives and Senators in the Congress of the United States. The Committee shall endeavor to keep members of the State Medical Society informed on trends and developments in national legislation that may be expected to affect medical service.

COMMITTEE ON STATE BLOOD BANK

The purpose of this committee is to promote the development of a statewide blood bank operating in the interests of the people and the medical profession. The committee is authorized, in the name of the Society, to cooperate with responsible agencies such as the American Red Cross, the State Department of Health, in prescribing professional policies of the operation of a blood bank.

COMMITTEE ON MEDICAL CARE OF VETERANS

The purpose of this committee is to cooperate with the Medical Section of the U. S. Veterans Administration and to represent the medical profession in Connecticut in all negotiations concerning the medical care of veterans, the payment for such care, and matters of general medical policy, and to serve as the Medical Advisory Committee to the Connecticut Veterans Home and Hospital.

COMMITTEE ON RURAL MEDICAL SERVICE

The purpose of this committee is to develop a program of medical service for the rural population of Connecticut in cooperation with the Council on Rural Medical Service of the AMA.

ADVISORY COMMITTEE TO THE STATE BOARD OF EXAMINERS FOR NURSING

The purpose of this committee is, upon request, to cooperate and advise with the State Board of Examiners for Nursing in matters of general policy.

DELEGATES TO COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES

The duties of these delegates shall be to represent the Society at meetings of the New England Council and shall, upon direction of the Council or the House of Delegates, cast one unit vote for The Society on all matters calling for such vote. The chairman is charged with the responsibility of maintaining liaison between the organizations and with preparing and filing a report of the delegates at the annual meeting of the Society.

COMMITTEE TO STUDY MATERNAL MORTALITY AND MORBIDITY

The purpose of this committee is to study maternal mortality and morbidity in Connecticut with the purpose of making their best contribution toward lowering the maternal and morbidity rate from these causes.

ADVISORY COMMITTEE TO THE STATE COMMISSIONERS OF WELFARE, FINANCE AND CONTROL

The duties of the committee shall be to advise and assist the Commissioners of Walfare, Finance and Control in all matters concerning the medical care and hospitalization of state beneficiaries and to promote and foster cooperative relations between state employed personnel and all members of the medical profession.

CONFERENCE COMMITTEE FOR THE IMPROVEMENT OF THE CARE OF THE PATIENT

This is a joint committee, consisting of representatives from the State Medical Society, the State Nurses' Association, and the State Hospital Association. Its purpose is to study problems of mutual interest to the medical, nursing and hospital administrative professions with a view to finding solutions to problems involving improvement of the care of hospital patients.

CONFERENCE COMMITTEE WITH THE CONNECTICUT STATE DENTAL ASSOCIATION

This committee is appointed to be the conference group with the State Dental Association and to discuss with that group problems of mutual interest to the two professions and bring the professions into closer relationship in all fields.

COMMITTEE TO STUDY PERINATAL MORBIDITY AND MORTALITY

The purpose of this committee is to inquire into the causes of perinatal mortality in Connecticut with the object of making suggestions for the removal of the causes of perinatal mortality.

CONFERENCE COMMITTEE WITH THE CONNECTICUT BAR ASSOCIATION

The purpose of this committee is to confer from time to time with representatives of the Connecticut Bar Association on matters of mutual interest to the medical and legal professions.

AMERICAN MEDICAL EDUCATION FOUNDATION

The purpose of this committee is to supervise and direct the solicitation of funds from physicians in Connecticut for the American Medical Education Foundation.

COMMITTEE ON ACCIDENT PREVENTION

The purpose of this committee is to study the causes and methods of prevention of personal accidents in Connecticut and in cooperation with the Committee on Accident Prevention of the Connecticut Chapter of the American Academy of Pediatrics and similar committees from other organizations, to make recommendations to prevent accidental injuries among the people of the state.

ADVISORY COMMITTEE ON MEDICARE PLAN AND FEDERAL EMPLOYEE HEALTH BENEFITS PROGRAM

The purposes of this committee are to: (1) cooperate with the Office for Dependents' Medical Care of the Department of Defense and Connecticut Medical Service in the operation of the Dependents' Medical Care Act (PL. 569, 84th Congress) in Connecticut, (2) supervise the medical professional phases of the plan in Connecticut, (3) determine appropriate fees for medical services not included in the Connecticut Schedule of Allowances, (4) determine matters of policy within the State jurisdiction, and (5) direct the plan coordinator in Connecticut. They shall also serve as an advisory committee under the Federal Employees Health Benefits Program.

MEDICAL ADVISORY COMMITTEE TO CEREBRAL PALSY ASSOCIATION

The purpose of this committee is to serve in an advisory capacity to the United Cerebral Palsy Association of Connecticut in matters relating to medical affairs.

COMMITTEE ON MEDICAL ECONOMICS AND INSURANCE

The purpose of this committee is to review and report on all matters and proposals relating to insurance coverage for members of the Society.

COMMITTEE ON AGING

The purposes of this committee are outlined in the minutes of this committee on September 3, 1958 and include the following phases of problems of the aged.

Aging and the Medical Profession.
Liaison with various organizations interested in the aged.
Education of various groups.
Meetings with representatives of nursing homes.
Facilities for the treatment of the aged.
Golden Age groups.
Custodial Care of the mentally ill.
Care of the Medically Indigent.
Insurance coverage.

COMMITTEE ON CONNECTICUT HEALTH CAREERS

The function of this committee shall be to endeavor to stimulate and encourage youths of Connecticut to enter into the study of medicine and allied health fields through counseling sessions in conjunction with the Woman's Auxiliary and each component association and through the dissemination of verbal and written information on exhibits to students and teachers in secondary schools.

COMMITTEE TO DEVELOP AGED MEDICAL CARE ASSISTANCE PROGRAM IN CONNECTICUT (P.L. 86-778)

The purpose of this committee is to develop plans for the administration of the "medical care of the aged" program in Connecticut.

COMMITTEE ON REHABILITATION

The purposes of this committee are to survey the present programs of rehabilitation in the state; to stimulate interest and the establishment of additional programs, where indicated; and to act as a clearing house for the mutual exchange of ideas with similar committees of other state medical societies and the AMA.

PANEL ON PHYSICIAN-HOSPITAL MEDIATION

The purpose of this committee shall be to assist in resolving disputes between members of the Society and hospital administrations wherein disagreement persists after all procedures outlined in the "Guiding Principles" outlined in the "Model Medical Staff By-laws, Rules and Regulations" of the Joint Commission on Accreditation of Hospitals have been carried out.

PENSION COMMITTEE

This committee was established to comply with the provisions of the pension trust agreement and is a standby committee for any necessary arbitration, such as early retirement, amendments, etc. No chairman appointed.

COMMITTEE ON INVESTMENT OF FUNDS

The purpose of this committee is to explore and have general supervision of the investment of the surplus funds of the Society operating in cooperation with the Society's fiscal agent, The Second National Bank of New Haven.

COMMITTEE ON BUILDING MANAGEMENT

The purpose of this committee is to supervise the operations of the Society's headquarters building, including all details of its financing.

NOTE: Article X, Section 1, Par. 3, of the By-Laws provides, "All Standing and special committees, except the Committee on Arrangements, shall make a written report to the Council before the first of April of each year for transmittal with recommendations to the annual meeting of the House of Delegates. The Council, in its discretion, may request that any standing or special committee make a semi-annual report in writing to the Council for transmittal to the semi-annual meeting of the House of Delegates.

PLACEMENT OPPORTUNITIES

The Society's Placement Service is in receipt of the following:

WANTED GENERAL PRACTITIONER at once for busy partnership general practice in Fairfield County to help partially disabled senior partner.

OFFICE SPACE available for physician in New Haven County area.

HOUSE FOR SALE—Town of North Branford suitable for office and dwelling. No resident physician in the area.

John J. McCook Memorial Hospital has openings for full time House Physicians to serve tenures of at least one year's duration commencing any time subsequent to June 1, 1961.

ANY PHYSICIAN INTERESTED IN THE ABOVE IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN STREET, NEW HAVEN.

THESE 83,000 PEOPLE IN CONNECTICUT NEED MEDICAL HELP

Heart disease, cancer, mental illness — everyone knows the nation's three major medical problems. Do you know that alcoholism ranks fourth? In the state of Connecticut there are at least 83,000 alcoholics. These people need medical help. No one is in a better position to initiate and supervise a program of rehabilitation than the physician who enjoys the confidence of the patient or the patient's family.

ONE FOR THE ROAD BACK:

LIBRIUM

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During and after an acute alcoholic episode, Librium relieves anxiety, agitation and hyperactivity, induces restful sleep, stimulates appetite and helps to control withdrawal symptoms. The complications of chronic alcoholism, including hallucinations and delirium tremens, can often be alleviated with Librium.

During the rehabilitation period, Librium makes the patient more accessible, strengthening the physician-patient relationship. Librium therapy helps to reduce the patient's need for alcohol by affording a constructive approach to his underlying personality disorders.

Consult literature and dosage information, available on request, before prescribing.

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Special Article

SOME PSYCHOLOGICAL ASPECTS OF THERAPY WITH DRUGS

WILLIAM KAUFMAN, M.D., *Bridgeport*

PART III

When alleviation of symptoms with medications is substituted for a thorough clinical study of the patient, diseases of major importance may be overlooked at a time when their detection and treatment might have proved most beneficial to the patient.

The unconscious fantasies a patient has about his doctor and about the power of medications may influence favorably or unfavorably his ability to take medications as prescribed.

The onset of sickness forces every patient to develop some degree of dependency, both psychological and physical, on other people as well as on medications. As the patient recovers from his illness, the doctor must help rehabilitate him emotionally so that he can function without such dependent needs.

SPECIAL PROBLEMS OF DRUG THERAPY

Drugs may Delay Diagnosis

THE heavy pressures put on doctors by patients and their families to "do something" in instances of psychosomatic, neurotic and psychotic illness may delay correct diagnosis and treatment, especially if potent tranquilizers are prescribed as the step preceding the clinical work-up of the patient. For example, a patient with pellagra without dermatitis may act as if he had a primary psychosomatic, neurotic or psychiatric ailment. His symptoms may be reduced or modified by tranquilizers so that for a time the underlying disease is not recognized or treated. Similarly aberrant mental and psychosomatic functioning in severe hypothyroidism, untreated pernicious anemia, untreated adreno-cortical hypofunction and hypomagnesemia may be lessened to some degree by sedatives, tranquilizers and psychic energizers. But for all these conditions there are specific corrective therapies with medications which restore not only normal physiologic balance but also normal mental and psychosomatic functioning.

In the "drug-for-symptom" type of medical practice, unfortunately symbolic medications (and, for that matter, potent pharmacologic agents including tranquilizers) may be used as substitutes for careful clinical study. The physician may mistakenly reason that if the patient loses symptoms in response to symbolic medication, then these were entirely psychosomatic in origin and of trivial importance. If potent pharmacologic substances control symptoms, this doctor and his patient are usually satisfied, and no study is done to seek the cause of symptoms. This is one reason why the existence of major disease in its early stages may be overlooked until with the passage of time the underlying pathologic process has advanced to the degree that cure is difficult if not impossible.

DRUGS AND THE PATIENT'S MIND

Since the advent of tranquilizers and psychic energizers, a highly specialized field of psychopharmacology has evolved rapidly, and the management of acutely disturbed and chronically psychotic patients has been greatly altered. The new psychopharmacologic agents have lessened many of the administrative problems of managing seriously ill psychotic patients in mental hospitals. In addition, they have proved a useful adjunct to psychotherapy. Lysergic acid diethylamide (LSD-25) and other compounds have been useful in creating model psychoses for experimental study and evaluation of psychopharmacologic agents that might modify these man-made psychotic-like syndromes. But for purposes of this paper, I shall not discuss the use of these agents in psychotic individuals or the model psychoses set up in normal and neurotic persons. Instead, I shall briefly mention some adverse effects of drugs in common use on the mental functioning of non-psychotic patients.

Many drugs now used in treatment of non-psychotic patients interfere with judgment, mood, sense of values, motor abilities, coordination ability, balance sense and other functions of the nervous system.[11, 16, 21, 25, 32, 41, 51, 52, 54, 59] For example, certain antihistaminic drugs used in treatment of allergies may markedly decrease the patient's alertness and make him drowsy and accident-prone. They may also cause confusion and mental depression. In children, antihistaminics may produce patterns of agitated behavior. Some patients receiving ephedrine, amphetamine or dextro-amphetamine develop severe depression, lasting for the duration of drug action, or, in some instances, hypomania. Drugs in the Rauwolfia family when used in treatment of hypertension may also cause serious depression. ACTH and the various congeners of cortisone may cause elation, euphoria, a sense of great inner stress and severe depression. Barbiturates, bromides and ataraxic agents used to control anxiety and tension may induce serious degrees of inattentiveness, loss of memory, confusion, accident-proneness, lack of proper responsiveness to both pleasurable and unpleasurable stimuli of everyday living, deprivation of critical judgment, reduction in ability to think creatively, and decrease in initiative. In older people, large amounts of sedation, especially in those who are very ill, may favor the appearance of confusional states and delirium.

These secondary drug-induced, iatrogenic alterations in the set and functioning of the mind are rarely predictable, and should not be confused with primary psychogenic alterations in thinking, feeling and behaving. When drug-induced adverse mental functioning occurs, as a rule it calls for immediate cessation of treatment with that drug, especially if the patient develops a depression. If cortisone or any of its congeners causes symptoms of depression, the patient may have to take ACTH to stimulate his own adrenal glands to normal activity before therapy with endocrine drugs is terminated. The literature gives abundant examples of those with drug-induced depressions who have attempted or committed suicide. Some people need electroshock treatment and long-term psychotherapy to correct a depression which was either initiated or worsened by the use of a drug. Every patient developing a severe depressive reaction in response to medication must be watched for self-destructive tendencies, and if possible prevented from putting these into action.[1]

THE PATIENT'S FANTASIES ABOUT DOCTORS AND DRUGS

Today millions of individuals owe life and health to the curative effects of drugs. Others who cannot be cured of epilepsy, diabetes, pernicious anemia, myasthenia gavis, hypertension, rheumatoid arthritis and other disorders may be helped to enjoy a full life as a result of appropriate maintenance therapy with specific medications. Even in many diseases which cannot be held in check or reversed by any known medical therapy today, drugs may alleviate pain, anxiety and tension, insomnia and many other distressing symptoms. Considering all these positive values of drug therapy, it is no wonder that it is held in such high esteem by so many.

In each person's fantasy life, there are certain feelings about doctors and medications. The doctor may be fantasied to be an all-powerful beneficent friend—or he may be thought of as being distant, unfriendly, and even capable of inflicting harm either because of sadism or ignorance. The patient who expects too much may be quite disappointed that his doctor does not have magical powers or remedies at his disposal. The patient who fantasies that his doctor is a misanthrope may learn to his surprise that the doctor is a pretty decent person. In the process of coming to grips with the reality of the doctor as a person, the patient may have quite a stormy time emotionally and psychosomatically.

In attempting to minimize problems arising from fantasies about the doctor and medicines, it is often helpful when first prescribing a medication to give precise directions for its use, and to heighten the positive psychological values of the drug through suggestion. At the same time, the doctor should prepare his patient emotionally for whatever side-effects the drug can have, and for the need to take additional medications should side-effects become sufficiently troublesome. If a drug has a high propensity for causing idiosyncratic, toxic, histamine-releasing or allergic reactions, or if the patient is allergic and has had drug allergies before, he should be told to report any new or troublesome symptoms at once to the physician. For the protection of the patient, certain tests should be done as necessary, such as blood counts, allergy tests, prothrombin values, alkaline phosphatase levels, electrocardiograms and gastro-intestinal x-rays. A schedule of visits to evaluate therapy should be set up, and modified as needed, and the patient may be asked to report by telephone at intervals.

Many a doctor is reluctant to warn patients of possible ill effects from correctly prescribed medications. He may not want to cause unecessary worry and anxiety or other adverse psychogenic effects. Perhaps, not liking what he hears, the patient will change doctors. The doctor may mistakenly assume that if there are side effects or adverse reactions of sufficient importance, the patient will get in touch with him right away. But the disadvantages of not briefing the patient far outweigh the advantages of keeping silent about possible ill effects from use of a drug. The patient who is not forewarned may become seriously ill from a toxic effect of a drug and continue taking it without realizing that there could be a relationship between the medicine and the complicating illness.

I have found that most patients do not develop adverse psychogenic reactions to a drug after having been warned of possible complications from its use. They take the medicine without resistance and simultaneously are alert for possible side effects. They seem to prefer knowing the potential risks of medical treatment rather than imagining boundless risks or being kept ignorant of risks. Most patients appreciate the carefulness of the doctor who explains the problems they face in therapy.

If a patient has had a major adverse reaction to drug therapy, he tends to retain latent fear which may be kindled into a panic reaction in the future if he needs to take medicine for a new ailment. Some doctors ill-advisedly reassure such a patient that another severe drug reaction is unlikely, when actually it is more likely to occur than if he had had no previous ill effects from drugs. This patient, too, should be told frankly about possible future adverse drug reactions, particularly that it is important to stop the offending drug promptly to prevent further progression of trouble from this source. He will be much less prone to consider that the occurrence of a toxic reaction indicates carelessness or malpractice on the part of the physician. Unfortunately, sometimes even with the first symptoms of adverse drug reaction the damage created by the medicine may be far advanced, and even though the medication is stopped promptly, the damage may continue to progress until the patient finally dies of the toxic drug reaction.

Fantasies about doctors and drugs make a physician's job difficult. A patient who unconsciously fears being harmed by medications may mistakenly believe that the drug is "too strong." The one who unconsciously feels that his doctor is not doing his utmost to make the illness a brief one may mistakenly believe that the medicine he receives is "too weak."

The patient who fears "too strong" medicine may refuse to take it even though he has the prescription filled, and no amount of persuasion will change his mind. Most patients in this group take the medicine less often and in smaller amounts than prescribed. If such a person fails to respond to therapy, it may be worthwhile to check with the druggist to see how often the prescription was refilled, to estimate the degree of under-medication, and knowing this, to try to persuade the patient to take the full dose.

On the other hand, the patient who mistakenly believes the medicine prescribed is "too weak" may deliberately take the drug too often, in larger amounts, and for a longer time than the doctor intended, mistakenly believing that he will shorten his illness and make his cure more complete. But he will be more likely to experience adverse side reactions or toxic effects than if he took the medicine as directed. For this reason, the doctor should prescribe only the amount of medication the patient actually needs for the treatment of any short, acute illness he may have, and if medicines are needed over a longer period of time, to ask the druggist to call before refilling the prescription.

Many people have the fantasy that there is always a specific drug which can relieve a specific symptom promptly, and that all a doctor has to do is to know the symptom, and then immediately prescribe the correct remedy. Such a patient may wish to have prescriptions by telephone. What he does not want is a careful physical examination. He may ask for a medicine to increase his strength, something to kill his appetite, or a drug to relieve his pain or discomfort. Some will ask for something for the "nerves," others for something to relieve "kidney trouble," "rheumatism," "arthritis," or "indigestion." They seem less concerned about getting treatment for their basic disease condition than in getting immediate and continuing relief from whatever symptom bothers them at the moment.

Today, because of remarkable advances in the creation of new and potent drugs, many sick people tend to be impatient if the doctor does not quickly alleviate their symptoms. If prescribed medications do not produce freedom from specific symptoms, they go looking for "miracle drugs," making the rounds of many different doctors, and pharmacists too. The problem is often accentuated by the glowing reports in various publications about the therapeutic values of new drugs. Sometimes the doctor should inform his patients about the limitations and dangers of therapy with a new drug, and also the fact that the drug may not be appropriate for their particular ailments.

DEPENDENCY NEEDS OF SICK PATIENTS

The onset of illness forces a person to develop some degree of psychological as well as physical dependency on others, which is quite natural.[26, 48, 58] He cannot do what he usually did for himself, and may not be able to cope with the emotional stress of his illness or life situation. Under these circumstances he may regress emotionally to some degree and begin behaving childishly. He may make constant demands on others to do more and more for him in accordance with his whims, exaggerating his discomfort and physical disability to get attention, kindness, sympathy and release from certain duties and obligations. He may even develop an unconscious reluctance to get well in order to punish members of his family. As a further psychological reaction to illness he may develop anxiety, depression, anger, fears, irritability, insomnia, anorexia, nausea, headaches, increased muscle tension and restlessness. Of course, some of these symptoms could be part of his "organic" ailment. But one clue to their psychogenic nature is that they do not diminish as he recovers from his "organic" illness. Another clue is that these psychogenic symptoms do diminish and disappear in response to appropriate psychotherapy, especially if they are of recent origin.

When illness strikes, the patient may develop an insatiable need to have others cater to his dependent needs over and above the actual demands of the ailment. He soon learns to dominate others through the instrument of his illness. Particularly the person who was generally submissive when he was well may find illness to be very attractive emotionally, because through it he can become a dominant force in his family, perhaps for the first time. Sometimes, chronic invalidism has this emotional basis.

The doctor may not recognize at first that many of the patient's symptoms represent needs for psychological dependency. He may find himself giving the patient stronger and stronger drugs to quiet complaints. But medicines alone cannot satisfy the dependency needs of a patient, and this may actually create the background for potential emotional and physical addiction of the patient to medications.[22, 48] Sometimes it is necessary at the beginning of an acute illness to give maximum relief from pain and other distressing symptoms with powerful pharmacologic agents, but then these should be tapered off so that the patient experiences no more than tolerable discomfort, and henceforth reduced progressively until none are taken.

Drug therapy should almost never be terminated abruptly, unless adverse drug reactions occur. Sudden cessation of medication may symbolically mean to the patient withdrawal of the doctor's psychological support. In the case of a sedative such as phenobarbital or a tranquilizer, meprobamate, it may make the patient abruptly feel anxious, unpleasantly alert, restless, tense, and unable to get a good night's sleep. These psychosomatic phenomena result from sudden withdrawal of both the symbolic and pharmacodynamic support of the drug. To avoid psychogenic withdrawal reactions, the doctor should prepare the patient emotionally for the termination of drug therapy, and then gradually decrease the amounts of medication taken until finally he takes none.

It is important also to encourage the patient and allow him to do more and more for himself during recovery from illness, and at the same time to restrain his family from doing as much as they did for him initially. This also tends to decrease the possibility of his developing pathologic emotional dependency.

(This is the third of a series of four articles. The references will be published with the last article.)

SEPTEMBER 27, 1961

36th CONNECTICUT CLINICAL CONGRESS

of the

Connecticut State Medical Society

and

YALE SCHOOL OF MEDICINE

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YOUR CONCERN: Rapid relief from pain for your patient. Get him back to his normal activity, fast!

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> Kestler reports in controlled study: *Average time for restoring patients to full activity: with Soma, 11.5 days; without Soma, 41 days.* (*J.A.M.A. Vol. 172, No. 18, April 30, 1960.*)

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only in higher dosages. Soma is available in 350 mg. tablets. USUAL DOSAGE: 1 TABLET Q.I.D.

The muscle relaxant with an independent pain-relieving action

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Clinical Medicine

CONNECTICUT'S MEDICAL PROFESSION PLAYS ITS PART IN PROMOTING THE HEALTH OF THE SCHOOL-AGE CHILD

Martha L. Clifford, M.D.,* *Hartford*

PART III

1959 National Conference on Physicians and Schools, Showed Ways in Which Physicians Can Gain for Their School-Age Patients a Practicable Health Program.

The American Medical Association, already having established a reputation for cordial hospitality to educators, maintained its reputation at its 1959 Conference. The exchange of ideas on a friendly and personal basis will have far-reaching effects, although these may require considerable time for fruition.

The following are interesting excerpts from the Report of the Seventh National Conference on Physicians and Schools which were agreed upon by physicians and educators who attended:

"The child's health and medical care is basically the responsibility of the family, with the health department and the school providing necessary supplementary and complementary preventive services.

"Continuous health supervision of all children from birth throughout childhood, ideally by the child's own physician, is accepted as a standard.

"Education authorities feel the need to know the health status of their students.

"No single plan [of school health education] will work everywhere.

"A health examination includes the complete history, a thorough examination, counseling about problems of healthful living, and necessary and appropriate immunizations.

"Emphasis [on health examinations] should be on adequacy rather than frequency.

"Parents, especially of elementary-age children, should be encouraged to be present [during examinations].

"The best place for health examination of a child is in the office of the child's or the family's physician.

"Examination by the family physician in his office carries more connotation of independent personal action than an examination made in school and would have a better educational carry-over.

"Locally acceptable provision should be made for the [health] examination of indigent children.

"The [health] examinations by the family physician and dentist should have values other than the finding and correction of defects, such as advising the Child and his parents regarding diet, healthful living practices and proper procedures in the medical supervision of both health and illness.

"It is inadvisable to have annual [health] examinations of all pupils as recommended by some state laws, since this is an unwise expenditure of money and professional time.

"It was suggested that previously determined optimum frequencies are still acceptable—at least four health examinations during the school life of the child and additional examinations whenever referral is made by the school nurse or teacher.

"Educators, including teachers and administrators, school health service personnel, practicing physicians and dentists, the local public health personnel, parents and all others concerned with child health need to understand each other and to establish a working relationship in terms of their mutual concern for the health and welfare of children.

"There is need for further controlled epidemiologic studies to determine the relative values of periodic health examination in comparison to baseline examinations followed by teacher-nurse observation and followup. These could be similar to the Rochester Study reported.†

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* *Director, Community Health Division, Connecticut State Department of Health.*

Connecticut State Medical Society invited and sent Dr. Clifford to represent the society at the Sixth and Seventh National Conferences on Physicians and Schools.

† Yankauer, Alfred, M.D. and Lawrence, Ruth, M.D. A Study of Periodic School Medical Examinations. In 2 parts—Am. J. of P. H., Vol. 45, January 1955, pp. 71-78, and Vol. 46, December 1956, pp. 1553-1562.

"Local medical societies, working with school personnel, should be charged with the responsibility for developing standards for local school health examinations that are an educational experience for both the child and his parents.

"It is the duty of organized medicine to assume its responsibility for leadership in school medical care procedures, including bringing about changes in school laws which regulate the frequency of health examinations."

Classification of students for physical education is still a problem to educators and physicians, and this difficulty arises in part due to lack of definition of terms used and therefore becomes a problem of semantics. For example, various classifications have been broken down into five or more items, but the classification used in a given community may not be agreed upon by both the educators and the physicians. Following are two examples:

"I. Unlimited activity and sports participation.

"II. Slightly modified program.

"III. Definitely restricted program.

"IV. Individual physical education or physical therapy as prescribed.

"V. Rest."*

"1. A—No limitations; this includes class, intramurals, and interscholastics.
"2. B—No limitations for class—excused from intramurals and interscholastics.
"3. Special—Specific limitations in class and excluded from intramurals and interscholastics.
"4. Rest—Rest period for physical education class and excluded from intramurals and interscholastics.
"5. No P.E.—Excused from physical education and excluded from intramurals and interscholastics.†

Although there is some similarity in the above lists, the similarity itself may produce confusion. Clear definitions are needed.

In his paper, Ewald H. Pawsat, M.D., of Fond du Lac, Wisconsin, advised the use of a form patterned after the physician's prescription blank. The blank is used for this purpose of classifying a child for physical education (gym) class. In the form of a physician's prescription blank, physicians can use it to explain whether the child should have a full or modified type of participation in physical education. Dr. Pawsat said further: "The range of participation is numerically listed in graduations from unlimited activity and sports participation to complete rest on a cot during the school period allotted to physical education. . . . The blank is complete enough, giving practical examples of the types of physical activity for each category so that the physician is well informed as to the nature of the activity he is prescribing."

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Physician's Prescription of type of Physical Education‡
(Please use ink)

Date ....

To Principal .... School:

Because of the physical condition listed below, the type of physical education I prescribe for .... is:
(name of student)

I. *Unlimited activity and sports participation* (vigorous exercises, hopping, jumping, use of heavy apparatus, climbing, major and minor sports) .... ☐

II. *Slightly modified program* (mild exercises in sitting and hanging positions, simple games, table tennis, archery, golf, skating, mild dancing) ..... ☐

III. *Definitely restricted program* (general free exercises in sitting and lying positions, simple games, ball passing, marching drills, bean bag games, darts, shuffle board) .... ☐

IV. *Individual physical education or physical therapy,* as prescribed by you .... ☐

V. Rest (on cot) .... ☐

Physical condition:
Acute: post-communicable disease, post fracture, acute infection, other ☐
Chronic: cardiac condition, hernia, menstrual disorder, other .... ☐

Length of time this prescription applies ....

Signature .... M.D.

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* From a paper presented at the Seventh National Conference on Physicians and Schools by Ewald H. Pawsat, M.D., of Fond du Lac, Wisconsin.

† From a paper presented by Margaret A. Bourne, of Evanston, Illinois, at the Seventh National Conference on Physicians and Schools.

‡ Laws of Wisconsin Relating to Public Schools 1952: "40.22 Curriculum—(3) Physical Education (a) Physical instruction and training shall be provided for all pupils in conformity with the course of instruction in physical education prescribed by the State Superintendent."
May 1953

Dr. Pawsat added: "In order for the physician to correctly classify these pupils for physical education activities, he must be properly acquainted by school authorities as to the types of physical education programs available to these children."

It is therefore recommended that ways be found in Connecticut whereby practicing physicians can become acquainted with the appropriate school personnel and with the types of physical education programs available. One suggestion is that county medical societies and city medical societies include in the program of their regular meeting at periodic intervals topics related to school health problems, and that educators be invited to these meetings. Special meetings initiated by state medical societies, such as the two Conferences on Physicians and Schools which have already been held in Connecticut, should be continued.§ The medical society might take the initiative in inviting educators to attend regular or special meetings where the agenda concerns medical problems in the school-age children of the community.

SUMMARY:

Pertinent points made at the Seventh National Conference on Physicians and Schools on the topics of periodic health examinations of school children and classification of pupils for physical education are presented. Connecticut physicians are urged to acquaint themselves with the various gradations of physical education programs available in the schools.

(*This is the third in a series of four articles.*)

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§ A third one was held in 1960 on prevention of athletic injuries.

Heartburn Caused By Stomach Reflux

Heartburn is not associated with pressure changes in the stomach or esophagus. It is caused by the regurgitation of stomach contents into the esophagus.

These conclusions were drawn from one of the few studies made on patients while they were experiencing intermittent heartburn attacks. The study was reported in the current Journal of the American Medical Association.

The subjects were 12 men ranging in age from 26 to 66.

All of the patients consistently complained of heartburn during regurgitation, the report said, and the heartburn disappeared whenever the reflux stopped.

No pressure changes could be correlated with the regurgitation.

Although stomach acids were regurgitated in the study, the report said, it was assumed that an alkaline solution might have served as an equally potent stimulus to produce heartburn.

Other factors also may be involved in producing heartburn, the report pointed out.

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Around The State

Naugatuck Valley Medical Society

The semi-annual report for 1961 reveals that in January, the Naugatuck Valley Medical Society began work on the production of a Personal Health Record. This form is to be distributed free of charge to the community and will serve as a form for recording the medical history of each individual member of a family. A suitable public relations program will be developed around it.

In February, a joint meeting with the District Nurses Association, the ambulance organizations and the civil defense organizations of the five communities was held. Problems of mutual concern were aired several concrete projects were undertaken to remedy trouble spots turned up at the meeting. About thirty doctors and sixty paramedical people attended. Dr. Philip D. Henry served as program chairman.

In March, local implementation of the CSMS legislative policies was begun. Negotiations for a local group insurance program to fill in gaps within the county and state programs were authorized, and a program designed to improve local doctor-hospital relationships was approved.

In April, Dr. James P. Mooney was appointed liaison representative to the advisory board of the local lay psychiatric association, and a group insurance program was explored.

In May, a second investment club was formed to allow more of the membership to participate and was named the Presbyopic Investment Club. A well attended joint meeting under the direction of Dr. Henry was held with the clergymen of all faiths. A greater understanding of mutual problems and a clearer appreciation of mutual goals resulted.

In June, the sixth of the spring series of polio immunization clinics was held. A fourth NVMS College Scholarship was awarded to a local high school graduate on the proceeds of the polio clinics. The scholarship award board consisting of physicians, educators and lay persons is chairmaned by Dr. John M. Renehan. Each scholarship will provide the recipient with four years of education at the college of his choice. There are currently four such students thusly sponsored.

The Annual Picnic was held on June 3, 1961 and the Bus Trip to a "sporting event" occurred on June 8, 1961. Committee plans were laid for the summer months pending resumption of regular monthly NVMS meetings in the fall. Support of the CSMS and AMA legislative positions on the King Bill was authorized at the monthly June 13 meeting and is being carried out both by the society and by individual doctor families with the aid of the Women's Auxiliary's "Telephone Squad".

New Haven County

Theodore Lidz, professor of psychiatry at Yale School of Medicine, received the Frieda Fromm-Reichman Award for Research in Schizophrenia at the American Academy of Psychoanalysis meeting in Chicago on May 6th. Dr. Lidz is the first recipient of this award by the academy.

Robert Shapiro, Chief of Radiology, Hospital of St. Raphael, has begun a one year leave of absence to serve as Visiting Professor of Radiology at the Hebrew University-Hadassah Medical School, In Jerusalem for 1961-1962. Dr. Shapiro has served in his present post at St. Raphael's for the past thirteen years.

New London County

The June scientific meeting of the New London County Medical Association was held at the Charles Pfizer's Medical Research Laboratories in Groton. After a tour of the laboratories and dinner, a scientific paper was presented by Dr. Max Gahweiler, Clinical Director of Charles Pfizer's International. The topic of his paper was "Medical Research Abroad."

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1961 MEETINGS

October 19 – Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

November 27-30 – Clinical Meeting, American Medical Association, Denver.

September 27—36th Connecticut Clinical Congress, Mary S. Harkness Memorial Auditorium, Yale School of Medicine, New Haven.

Doctor's Office

C. George LaTaif, M.D., announces the removal of his office from 38 Foster Street to 345 Main Street, Danbury.

Frank Lovallo, M.D., announces the removal of his office from 382 Prospect Street to South Main Street, Sharon.

Harold Schwartz, M.D., wishes to announce his return to the practice of radiology at 99 Pratt Street, Hartford.

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Book Reviews

DIAGNOSTIC ANATOMY by Weston D. Gardner, M.D. C. V. Mosby Co., St. Louis, 1958. 20 figures drawn by the author. 376 pages. $10.00.

REVIEWED BY LOUIS H. NAHUM

This book is written for the physician who in the course of a physical examination is confronted with morphologic features of the human body. This means every physician. It is he who deals with the human body, but because he is involved in many of the problems of providing medical care, he gradually tends to become separated from the body and slowly loses visualization of the internal portions of the body. It is not long after graduation and even after departing from the dissecting room that the interior of the body slowly recedes. This mental gulf is widened by the need to acquire knowledge of the functional and pathologic aspects and by the flood of clinical material that crowds on his consciousness.

The surgeon, pathologist and radiologist must continually resurrect and expand this knowledge for otherwise he could not perform his work. But the student, the general physician and the internist is not under such compulsion. As a result there sets in a slow forgetting of fundamental morphology with resulting mistakes and groping for anatomic facts which were at one time paramount in the student's mind.

When examining a patient if the physician were to ask himself just what structures are being palpated or what tissues intervene between the surface and organs to the interior he would soon be confronted with the need for just such a book as Dr. Gardner has produced. Furthermore without the morphologic knowledge gained long ago it is frustrating to attempt a correlation with the clinical problem under study. The truth is that in the course of a physical examination, regional, gross and topographic anatomy must be closely correlated with the other signs elicited by palpation, percussion and auscultation, to arrive at a working diagnosis. Anatomy and physiology form the basis for those signs and symptoms which are revealed by a physical examination and it is this which is the solid body of reference for understanding clinical medicine.

Dr. Gardner who is Associate Professor of Anatomy at Marquette was first a clinician before he became an anatomist. As a clinically trained anatomist he was able to translate the complexities of anatomy into a reasonably working basis for the practicing physician.

The book consists of 11 chapters. In Chapter I "The patient before you" he discusses constitutional anatomy, body types, differences between male and female; anatomic factors in the estimation of tissue nutrition and hydration, ageing of the human body, appraisal of posture and attitude of the patient. In Chapter II is a thorough analysis of the integumentary system, the hair, nails surface and skin lines, color, factors in palpation of the skin, its structure and the skin in neurologic diagnoses. This same method of anatomic and clinical correlation is carried through in all subsequent chapters on the "Head"; "The Neck"; The "Thorax in General and the Thoracic Wall"; "The Lungs and Pleural Cavity"; "The Extremities" and finally "The Vertebral Region." In every chapter one finds a correlating section of anatomy and physical diagnosis such as diagnostic significance of superficial thoracic veins; the thoracic barrier as a tool in physical diagnosis; Diagnostic considerations of pleura; Anatomic basis for diagnostic techniques of the lung; Anatomic basis of electrocardiography; Anatomic factors in examination of the abdominal wall; sites for small fluid accumulations in the abdominal cavity; Morphologic basis for abdominal sounds.

At the end is a valuable index first on morphologic aids to diagnosis and neurologic aids to diagnosis. Part II is a check list on ageing, topographic projections and on reflexes. Part III is an alphabetical listing.

This book is really the anatomical basis for physical diagnosis and must be joined with another one on elements of physical diagnosis. Then the student and physician will gain the intellectual pleasure which comes from understanding what one sees, hears and feels in the course of making a clinical diagnosis. There is no doubt that there is a movement in clinical medicine away from over-reliance on laboratory aids and towards a more complete physical examination. The modern physician is becoming an able physical diagnostician as was his forebears before clinical and laboratory techniques gained the ascendancy. A book such as this will hasten a long needed correction in emphasis on what is important in making a diagnosis. It will do more, it will help the doctor gain pleasure and satisfaction in an examination well done.

COMPLICATIONS IN SURGERY AND THEIR MANAGEMENT. Edited by Curtis P. Artz, M.D. and James D. Hardy, M.D. W. B. Saunders Co., Philadelphia, Pa., 1960, 1075 pp. $23.00.

REVIEWED BY MARK HAYES

It is nearly an impossible task to review in detail the merits or shortcomings (if there are any) of such a voluminous presentation as this. As a matter of fact, the practice of surgery has become so specialized that a reviewer must write critically of the small segment with which he is acquainted.

The publication under consideration provides the general surgeon (and many special surgeons) with a source in which he may find authoritative and specific advice on the management and prevention of complications he is likely to encounter at the operating table and through early convalescence. The authors of this volume edited by and contributed to by Drs. Artz and Hardy are distinguished surgeons who can be counted upon to have come to grips personally at one time or another with each of the problems discussed; they have drawn extensively on the experience of others equally skilled as shown by the high degree of reference selection.

From a strictly personal viewpoint, if all the sections are handled with the care and precision devoted to "Infections in Surgery," "Complications of Antibiotic Therapy," "Shock During and After Operation," "Complications of Blood

Transfusions," and other general topics, there is no doubt that this book should be thoroughly *studied* by every general surgeon.

The section, chosen from particular interest and sampling, relating to the complications of gastric resection is really a classic. Dr. Hardy in his inimitable teaching fashion discusses early hemorrhage hiccups, pancreatitis, and jaundice with clarity and precision. Problems relating to the reconstruction of the bowel are set forth in a straight-forward manner advising prevention or correction. Late complications, as important to the comfort of the patient as any other, such as nutritional problems, are discussed intelligently and practically.

The lack of esoteric ambiguities is commendable throughout the text; a problem is stated: its diagnosis, prevention and correction are presenetd in a fashion to help everyone do better for his patient whether he be the novice or the skilled practitioner. The book should be in every operating surgeon's library; to be there is not enough, it should be a very dog-eared text from frequent consultation.

REGULATION OF THE INORGANIC ION CONTENT OF CELLS, Ciba Foundation Study Group No. 5, Edited by G. E. W. Wolstenholme and C. M. O'Connor, Little, Brown and Company, Boston, Mass., 1960, 93 pp.

REVIEWED BY JOHN CONRAD

This slim volume is the record of a study conference that met in England on the 6th of April, 1960. The list of persons participating in or attending the meeting contains some of the most illustrious names in modern Physiology. Therefore, it is logical to assume that the results of the parley are of interest to Physiologists throughout the world. One is not disappointed! Although nothing of earth-shaking importance was revealed at this meeting, the papers given and the discussions that followed them, serve as an articulate summary of modern thought upon certain questions concerning inorganic ion regulation in cells.

The guest of honor at this meeting was Professor E. J. Conway and his influence is perceptable in spirit as well as in fact. The lead article is a recapitulation of some of his more recent work on the redox pump theory as it pertains to sodium excretion in skeletal muscle. It is important to recall that the classical work of Boyle and Conway (J. Physiol. 100:1, 1941) is still one of the few cogent, inclusive theories relating membrane potential, cellular volume and inorganic ions to each other. The redox pump theory in the hands of Professor Conway, is a continuation of this theoretical treatment to include active transport.

All of the articles are of high caliber, however, two sections are worthy of mention. The first was the paper by P. C. Caldwell on the regulation of ions by phosphate compounds. This work points out the leading participation of high energy phosphate compounds in the active transport of sodium and potassium ions. Of more importance is the short discussion concerning the influence of intracellular ionized calcium upon muscular contraction and relaxation. The second section of importance is really a general one. That is to say that the discussions following each paper were often illuminating for the divergent opinions expressed and for their general content.

Recently, the various drug companies in the United States have been sharply criticized for their conduct with regard to both ethical and mass advertising. Whilst this reviewer does not wish to argue the pros and cons of these disclosures, it should be pointed out that books, such as this one, stand for the highest aims of the drug industry. Patently, it is a volume of marginal usefulness to the average clinician; covering a subject of more interest to the Physiologist. Yet, CIBA supported the conference and undoubtedly absorbed many of the additional expenses regarding the publication of the outcome of this "meeting of the minds." They are to be congratulated and, we hope, emulated.

MANAGEMENT OF FRACTURES, DISLOCATIONS AND SPRAINS by H. Earle Conwell, M.D., and Fred C. Reynolds, M.D. The C. V. Mosby Co., St. Louis, Missouri, 1961, 1129 pp. $27.00.

REVIEWED BY DENIS S. O'CONNOR

The successful treatment of fractures and dislocations has always been a problem to many men in medical practice and because of their universal occurrence every general practitioner must be prepared to handle them. Since even in the hands of well qualified orthopaedists fractures at times turn out badly it is small wonder that the generalist approaches the handling of fractures with trepidation.

A good, easily readable book on fractures and dislocations, as well as the less terrorizing but still important subject of sprains is a necessity for every practitioner since to know that the treatment he is using is the accepted method of treating a given fracture is an assurance that can bring much peace of mind and in the long run a satisfactory percentage of good results.

Key and Conwell of which this book is the seventh edition has been the standard book on fractures since the first edition in 1934 and the present edition merits the acceptance with which previous editions have been received.

While four-fifths of the book is devoted to the diagnosis and treatment of specific fractures and dislocations arranged according to the affected body area, the early chapters devoted to problems common to all fractures constitutes important reading for anyone who must deal with the specific fractures.

The chapters devoted to the head and to the trunk areas are particularly valuable for those surgeons who are not orthopaedically oriented but who because of the general, or special, surgical aspects of a case must of necessity also handle the associated fractures.

While the illustrations on the whole are satisfactory the usefulness of the book to the generalist would be enhanced by a wider use of the line drawing rather than the picture for demonstration of technique.

The placement of references in the middle of the book is difficult to understand and placement on the page containing the problem to which the reference has application would seem more useful.

Unquestionably, this edition will find wide acceptance by those concerned in fracture treatment and can be highly recommended.

EMOTIONAL PROBLEMS OF THE STUDENT by Graham B. Blaine, Jr., and Charles C. McArthur with twelve contributing authors, Appleton-Century-Crofts, Inc., New York, March 1961, 248 pp. $4.95.

REVIEWED BY ROBERT L. ARNSTEIN

"Emotional Problems of the Student" by Graham Blaine, Jr. and Charles C. McArthur consists of fourteen chapters written by members of the staff of the Harvard University Health Service prefaced with an introduction by Erik H. Erikson. In general each staff member has contributed a single chapter, but the authors are represented more than once. The book describes the psychiatric problems of students, and the manner in which they are handled by the Harvard Health Service. In addition it devotes some space to the function and staffing of the psychiatric division of this service. It joins a small but growing number of volumes exclusively concerned with the emotional problems of the college population.

The emphasis of the book is descriptive, and its purpose is to review various aspects of emotional problems existing in college students. The authors state that it in part attempts to answer the question "Why does a college need a psychiatrist." It is directed primarily to educators and faculty members, as well as workers in the health field. To this end it is written clearly, colorfully and with a happy absence of technical jargon, which so frequently acts as a barrier in communication. The chapters are liberally sprinkled with brief case examples that provide interest as well as translating into familiar and recognizable terms many of the situations that are discussed. There is a good coverage of the main subjects of interest to the majority of college faculty and the approach, in addition to being sound professionally, has a foundation in common sense that should do much to dispel any lingering feelings among educators that psychiatrists regard themselves as possessors of a mystical, omnipotent knowledge. For professionals in the college psychiatric field it describes most of the types of problems encountered and the Harvard experience with the students affected.

The subject material covered includes chapters on the role of the college psychiatrist and psychologist, study problems, a general discussion of neuroses, psychoses and character disorders in college students, a chapter on therapy, and three chapters on the separate problems of special categories of students, the graduate school, the business school and the medical school. In addition there is a chapter on emotional problems of college women. Inevitably, there is some unevenness in the chapters, both in approach and in material covered, but the subject matter is always of interest and much pertinent and useful information is included.

RESUSCITATION OF THE NEWBORN INFANT by Harold Abramson, M.D., Editor, The C. V. Mosby Company, St. Louis, 1960. 274 pp. $10.00.

REVIEWED BY LOUIS GLUCK

Ordinarily medical texts which attempt to wed basic studies with clinical considerations and then give birth to a program of practical action for the clinician based on these studies are not only few but almost always fail in one or more of the areas they purport to cover. Resuscitation of the Newborn Infant is a distinguished exception. Here the thoughts of a sizable number of persons of various disciplines, some outstanding, all competent, are eagerly synthesized into a scholarly and very useful volume by the editor, Dr. Harold Abramson.

The text covers wide approaches to the newborn, including physiology and biochemistry, pathology, obstetrical anesthesia, drug therapy, newborn appraisal, fetal EKG, and many other topics, but always focused around the prevention of anoxia and brain damage. The very clear sections on resuscitation procedures and apparatus are alone worth the price of this book.

As has already been intimated, this text is of sufficient breadth to have appeal for clinicians and investigators alike. It carries the very timely message for all persons who come into contact with newborns which is implicit in the title. Its practical presentations, thoroughness and up-to-datedness recommend it to all persons concerned with newborns—pediatricians, obstetricians, anesthesiologists, surgeons, general practitioners, nurses, medical students. One must regard this as one of the most useful books ever compiled.

PATHOLOGY OF THE HEART; edited by S. E. Gould M.D., D.Sc; 2nd edition, 1960; Charles C Thomas, Publisher, Springfield, Ill., 1138 pp.; 639 illustrations; 20 contributors. $32.50.

REVIEWED BY ROY N. BARNETT

This comprehensive treatise is almost certainly the best volume available on the heart. The title is not fully descriptive of the contents, which include not only morphologic pathology but also embryology, physiology and surgery of the heart. The format, typography and illustrations are unusually fine, providing maximum ease of reading.

Outstanding for comprehensiveness are the sections on congenital heart disease by Jesse Edwards; these cover 236 pages with 162 illustrations. Although this is disproportionate to the clinical incidence of congenital lesions, it can be readily justified by current enthusiasm for accurate diagnosis and treatment of these lesions. Bradley Patten's discussion of the development of the heart and Maurice Lev's of the conduction system are admirable expositions of difficult material which in many books is quite dull. Averill Liebow's discussion of cardiopulmonary disease is provocative as well as informative; although many readers of this journal are already familiar with some of Dr. Liebow's thoughts all will benefit from this condensation of his present beliefs.

The other chapters maintain satisfactory standards although the emphasis given to some conditions reflects the enthusiasm of the author or the availability of his most dramatic illustrations perhaps more than the relative importance of the condition, at least by Connecticut standards. Probably the least useful section is on clinicopathologic correlation, written more in the style of the old differential diagnosis texts than in the physiologic context of the rest of the volume.

This book can be considered a standard work for chest surgeons, cardiologists and pathologists. As a reference volume it combines authoritative text and voluminous up-to-date references for internists, pediatricians and medical students.

The miracle behind miracles is that in nature there is no surrender.

PURPOSE...

In the path of any purposeful effort, there are obstacles that must be expected and overcome. For example, Blue Shield and the doctors who support it have not been without their share of problems in planning a program for care of the aged. Yet there has been no thought of giving up, for much has already been accomplished. As one doctor sums it up: "Blue Shield Plans already cover people over 65 in the same proportion as they exist in the population at large–and membership is growing at a faster rate in this age group!"

SPONSORED BY THE CONNECTICUT STATE MEDICAL SOCIETY
IT'S PART OF CONNECTICUT
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Connecticut Medical Service, Inc.

The Blue Shield Plan for Connecticut

1¼ Grs. Ea
FLAVORED

Living up to a family tradition

There are probably certain medications which are special favorites of yours, medications in which you have a particular confidence.

Physicians, through ever increasing recommendation, have long demonstrated their confidence in the uniformity, potency and purity of Bayer Aspirin, the world's first aspirin.

And like Bayer Aspirin, Bayer Aspirin for Children is quality controlled. No other maker submits aspirin to such thorough quality controls as does Bayer. This assures uniform excellence in both forms of Bayer Aspirin.

You can depend on Bayer Aspirin for Children for it has been conscientiously formulated to be the best tasting aspirin ever made and to live up to the Bayer family tradition of providing the finest aspirin the world has ever known.

Bayer Aspirin for Children—1¼ grain flavored tablets—Supplied in bottles of 50.

- We welcome your requests for samples on Bayer Aspirin and Flavored Bayer Aspirin for Children.

New
GRIP-TIGHT CAP
for Children's
Greater Protection

THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N. Y.

Nutritional Education For Professional Groups

The Committee on Nutrition of the Connecticut State Medical Society feels that an active program directed toward the continuous education of the resident staff and the visiting staff in the field of nutrition would be of great value. In order to bring this about the following recommendations are offered as a guide to all hospitals in the state:

1. Establish a nutrition committee composed of members of the medical and surgical staffs and representatives of the dietetic department for planning, clearance and approval of modified diets and procedures or appoint as nutritional advisor a qualified physician who will work with a dietitian to do the same. This latter suggestion might be the most efficient and effective method in some hospitals.

   This advisor or this committee would organize an educational program which would include:

   a. Orientation classes or conferences for new doctors, interns, and residents on hospital dietary procedures and diets.
   b. Prepare a kit for interns and residents, without charge, to include a diet manual and other dietary booklets deemed of value in this field. It should include whatever material may be available to give to the patient for the patient's instruction.
   c. Conferences for discussion of diet in relation to the patient.
   d. Set up luncheons using specific diets as the meals for house or attending staff.
   e. Encourage dietitians and student nurses to attend rounds with physicians for better care of patients.
   f. Set up simple exhibits near the cafeteria or any appropriate area in the line of traffic for reaching professional and nonprofessional groups.

      The following subjects might be the theme for an exhibit.

      1. Food misinformation—True or False tests.
      2. Normal Nutrition.
      3. Diabetic exhibit with food exchanges.
      4. Restricted sodium with heart association materials.
      5. Prenatal diets.
      6. Gastric Nutrition exhibit.

   g. Post illustrated nutrition facts in the cafeteria. The use of artistic advertising techniques would be of value. These simple illustrations could be placed where they could readily be seen by those going in and out of the cafeteria. They should be changed from time to time.
   h. Make use of house publications.
   i. Films on nutrition facts could be used.
   j. Emphasize the importance of the patient's discharge diet instructions. Find sufficient time to give such adequate instructions to the patient.

Robert P. Rogers, M.D., Greenwich

This article prepared at the request of and approved by the Sub-Committee on Nutrition of the Committee on Public Health of the Connecticut State Medical Society.

In Memoriam

Conklin, Cornelius S.—Bridgeport; Fordham University College of Medicine, 1916; prominent in the practice of obstetrics in Bridgeport, Dr. Conklin served as president of the Bridgeport Medical Association in 1935 and 1936 and as president of the St. Vincent's Hospital staff in 1928; son of the late Dr. and Mrs. William H. Conklin, he was born in Ansonia and attended the public schools there; during World War I he served with the U.S. Army Medical Corps and in World War II as examining physician for the Selective Service Board in Bridgeport; he was a member of local, state and national medical associations, and a number of professional and church organizations; died May 14, 1961, at St. Vincent's Hospital, aged 71 years.

Perrault, Joseph N.—Danielson; Tufts College of Medicine, 1907; widely recognized as a dedicated country physician, Dr. Perrault refused any citations, even those of his own medical association; born in Manchester, New Hampshire, he came to Danielson in 1909; he was reported to have delivered more than 8,000 babies during his more than 50 years of practice; he was active in community affairs and served for many years as an associate director of the Danielson Office, Connecticut Bank and Trust Company; died May 10 at William Backus Hospital, Norwich, following a lingering illness, at age 82 years.

Thompson, Lawrence E.—Meriden; Boston University School of Medicine, 1925; Dr. Thompson came to Meriden in 1940 as a member of the medical staff at Undercliff Hospital; in 1945, he succeeded Dr. Paul de la Vergne as assistant superintendent of the hospital; prior to coming to Meriden, he had served as a member of the staff at Seaside Hospital, New London, and had also practiced medicine in Hartford and Waterbury, where he was on the staff of St. Mary's Hospital; died May 17 at Grace-New Haven Community Hospital, aged 63 years.

Annual Reports

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1960 - 1961

(Continued)

The following reports presented to the House of Delegates appear as edited. All reports as originally submitted are on file in the General Manager's Office

REPORT OF THE TREASURER

The financial statements prepared by Seward & Monde, auditors of the Society, are printed in the agenda. These statements are respectfully submitted as the report of the Treasurer.

Isadore S. Goldberg

Seward and Monde
Certified Public Accountants
205 Church Street
New Haven 10, Connecticut

The Connecticut State Medical Society
New Haven, Connecticut

We have examined the balance sheet of The Connecticut State Medical Society as of December 31, 1960 and the related statements of income and surplus for the year then ended, have reviewed the system of internal control and the accounting procedures of the Society, and without making a detailed audit of the transactions, have examined or tested accounting records of the Society and other supporting evidence by methods and to the extent we deemed appropriate.

General Fund:

Cash in banks, reconciled and confirmed by direct correspondence with the depositories, is accounted for as follows:

Commercial accounts:		
Second National Bank of New Haven:		
Journal collections	$ 1,480.17	
Journal revolving fund	6,000.00	
General Manager's office revolving fund	6,000.00	
Income cash account	7,252.25	
Principal cash account	73.79	
		$ 20,806.21
Savings accounts:		
Branford Savings Bank, Branford	$15,000.00	
Connecticut Savings Bank, New Haven	19,348.90	
New Haven Savings Bank, New Haven	19,664.93	
National Savings Bank, New Haven	10,530.39	
Chelsea Savings Bank, Norwich	273.81	
Milford Savings Bank, Milford	13,009.97	
Society for Savings, Hartford	15,000.00	
		92,828.00
Total		$113,634.21

The Second National Bank of New Haven confirmed directly to us that as of December 31, 1960 they held the following securities as agent for the treasurer of The Connecticut State Medical Society:

United States Treasury Bonds:

FACE VALUE	RATE AND MATURITY		BOOK VALUE	MARKET VALUE
$2,000	4⅜%	1961	$2,000.00	$2,013.75
7,000	2½%	1969	6,795.73	6,387.50
5,000	2½%	1970	5,000.00	4,537.50
3,000	2½%	1971	2,979.11	2,692.50

Province of Canada Bonds:		
3,000 Province of Nova Scotia 3⅝% Deb. due March 15, 1964	2,988.75	2,970.00
3,000 Province of Saskatchewan 3⅛% due February 1, 1966	3,021.60	2,820.00
Stock:		
50 shares Celanese Corp. of Amer. Ser. A 4½% cum. preferred	5,181.25	3,625.00
Total	$27,966.44	$25,046.25

Dues receivable of $2,541 are segregated by counties as follows:

COUNTY	AMOUNT
Fairfield	$1,105.50
Litchfield	33.00
Middlesex	66.00
New London	132.00
Hartford	759.00
New Haven	379.50
Tolland	—
Windham	66.00
Total	$2,541.00

Accounts receivable—journal of $9,420.24 consists of $8,726.36 due from advertisers and $693.88 for reprints.

Accounts payable—journal of $433.82 represents amounts due for printing expenses in connection with reprints.

The following is a comparison of budgeted and actual general expenses:

	ORIGINAL BUDGET	ADDITIONAL ALLOTMENTS APPROVED BY COUNCIL DURING THE YEAR	TOTAL ALLOTMENTS	ACTUAL	ACTUAL UNDER OR OVER* BUDGET
General manager's office	$ 47,245.00	—	$ 47,245.00	$ 44,124.57	$3,120.43
Treasurer's office	7,295.00	—	7,295.00	7,013.55	281.45
General and contingent	12,375.00	—	12,375.00	12,596.75	221.75*
Public relations	21,610.00	—	21,610.00	20,188.52	1,421.48
Committee allotments	7,200.00	$ 175.00	7,375.00	4,704.32	2,670.68
Building maintenance	13,075.00	—	13,075.00	11,754.55	1,320.45
Journal	61,310.00	—	61,310.00	61,208.50	101.50
Totals	$170,110.00	$ 175.00	$170,285.00	$161,590.76	$8,694.24

Annual Meeting Fund:

Cash was confirmed directly.

1960 Assessment for Opinion Survey and Relative Value Study:

A special one year assessment of $5 per member, authorized by the House of Delegates at their semi-annual meeting on December 9, 1959, was levied against all members during the year 1960, to raise funds to partially defray the cost of an opinion survey and relative value study. The cost to conduct these two programs, it is estimated, will amount to approximately $30,000 of which one-half or $15,000 is expected to be raised from the special 1960 assessment and the balance is to be withdrawn from general fund surplus.

During 1960, the opinion survey was made and a statement of income and expenses and capital in connection therewith to December 31, 1960 has been included as a part of this report. No costs in connection with the relative value study were incurred in the current year.

SPECIAL FUNDS

Gurdon W. Russell Fund:

Cash was confirmed by direct correspondence and the Second National Bank of New Haven confirmed directly to us that as of December 31, 1960 they held the following fund securities as agent for the treasurer of the Connecticut State Medical Society:

FACE VALUE	BOOK VALUE	MARKET VALUE
$600 New York, New Haven and Hartford Railroad Co. 4%—due 2007	$ 397.62	$ 160.50
$900 New York, New Haven and Hartford Railroad Co. 4½%—due 2022	308.64	86.62
5 shares New York, New Haven and Hartford Railroad Co. 5% conv. pfd. stock—Series A	128.04	27.50
$1,000 Boston and Albany Railroad Co., 4¼% improvement bonds, due August 1, 1978	820.00	660.00
Totals	$1,654.30	$ 934.62

O. C. Smith Fund:

We confirmed the principal and income cash by direct correspondence.

Building Fund:

During the year funds have been transferred from the general funds to the funded reserve for depreciation. Cash of $21,433.30 on deposit in the Connecticut Savings Bank was confirmed directly.

Clinical Congress:

Cash was confirmed directly by the depositories.

General:

The General Manager's office has acted as collection agent for The American Medical Association's dues for the year 1960. At December 31, 1960 all collections to that date had been remitted to The American Medical Association.

In our opinion, the accompanying balance sheet and statements of income and surplus present fairly the financial position of The Connecticut State Medical Society at December 31, 1960 and the results of its operations for the year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Seward and Monde,
Certified Public Accountants

New Haven, Connecticut
March 17, 1961

Balance Sheet, December 31, 1960

GENERAL FUND

ASSETS

Cash	$113,634.21
Investments (market value $25,046.25)	27,966.44
Dues receivable—1960	2,541.00
Accounts receivable—Journal	9,420.24
Prepaid insurance	432.61
Total	$153,994.50

LIABILITIES

Accounts payable:	
Journal	$ 433.82
Accrued commissions—1960 dues	8.05

Surplus	153,552.63
Total	$153,994.50

ANNUAL MEETING FUND

ASSETS

Cash	$ 15,867.10
Prepaid expenses—1961 annual meeting	113.47
Total	$ 15,980.57

LIABILITIES

Surplus	$ 15,980.57
Total	$ 15,980.57

1960 ASSESSMENT FOR OPINION SURVEY AND RELATIVE VALUE STUDY

ASSETS

Cash	$ 3,402.66

LIABILITIES

Capital	$ 3,402.66

SPECIAL FUNDS

ASSETS

Gurdon W. Russell Fund:		
Cash	$ 5,091.29	
Investments (market value—$934.62)	1,654.30	
		$ 6,745.59
O. C. Smith Trust Fund:		
Principal cash	$ 1,000.00	
Income cash	504.31	
		1,504.31
Building Fund:		
Land	$ 12,270.31	
Building and equipment	140,172.20	
	152,442.51	
Cash—savings account (funded reserve for depreciation)	21,433.30	
		173,875.81
Clinical Congress:		
Cash		2,723.43
Total		$184,849.14
Grand total		$358,226.87

LIABILITIES

Gurdon W. Russell Fund—capital		$ 6,745.59
O. C. Smith Trust Fund—capital		1,504.31
Building Fund:		
Reserve for depreciation	$ 21,433.30	
Capital	152,442.51	
		173,875.81
Clinical Congress—capital		2,723.43
Total		$184,849.14
Grand total		$358,226.87

Statement of Income and Surplus
General Fund
Year Ended December 31, 1960

Income:		
Dues earned	$101,887.75	
Less, commissions paid	335.30	
		$101,552.45
Interest and dividends received		3,955.49
Rental income		3,960.00
Income from collection of AMA dues		620.12
Gross income		$110,088.06
Expenses:		
General manager's office	$ 44,124.57	
Treasurer's office	7,013.55	
General	9,933.22	
Contingent fund	2,663.53	
Public relations	20,188.52	
Committee allotments	4,704.32	
Building maintenance	11,754.55	
		$100,382.26
Excess of general income over expenses		$ 9,705.80
Less, excess of expenses over income—Journal operations		10.78
Net income		$ 9,695.02
Surplus, January 1, 1960		143,857.61
Surplus, December 31, 1960		$153,552.63

Details of Expenses
Year Ended December 31, 1960

General Manager's Office:			
Personal services		$ 40,349.00	
Less, reimbursements from:			
Treasurer's office	$4,000.00		
Medicare and outside addressing	111.75		
Committee expense	310.21		
Collection AMA dues	1,000.00		
		5,421.96	
			$ 34,927.04
General manager's expense			712.66
Pension—former executive secretary			2,000.00
Payments to widow of former executive secretary			2,500.00
Office supplies			303.48
Printing and postage			757.75
Automobile expense			758.50
Telephone and telegraph			192.14
Bank charges			8.64
Publications			21.89
Social security taxes			615.50
News letter			1,297.11
Miscellaneous			29.86
Total			$ 44,124.57
Treasurer's Office:			
Clerical and bookkeeping services			$ 4,000.00
Auditors			720.00

Fiscal agent		585.00
Postage and printing—(collection of society dues)		357.00
Collection of AMA dues:		
Personnel services	$1,000.00	
Postage and printing	318.00	
		1,318.00
Telephone and telegraph		22.05
Miscellaneous		11.50
Total		$ 7,013.55

General:

Chairman of Council	$ 300.00
President of Society	300.00
Council	1,459.36
Delegates to AMA convention	2,005.36
Blue Cross premiums for employees	341.20
Employees pension fund	5,527.30
Total	$ 9,933.22

Contingent Fund:

House of Delegates meetings	$ 495.63
Connecticut share of hospitality room—AMA meetings	290.94
Dues—Conference of Presidents	75.00
Sports injury conference	205.67
President's picture	7.00
Fifty year certificates and pins	109.79
Consultant—median income	50.00
White House conference	165.55
Conference on prepaid medical plans—Chicago	528.06
Conference on aging—Chicago	319.97
Symposium on Postgraduate Medical Education	112.83
Telegrams and printings of resolution on death of former executive secretary	67.79
Dues—Nutrition Council	5.00
Meeting notice cards	114.00
Dues—Chamber of Commerce	60.00
Dues—Connecticut Health League	10.00
Christmas party—staff	42.40
Binding copies of House of Delegates proceedings	3.90
Total	$ 2,663.53

Public Relations:

Personal services		$ 14,452.50
Printing and postage	$2,235.59	
Publications and reprints	214.46	
Clipping service	234.10	
Telephone and telegraph	349.63	
Travel and expense—including AMA meetings	659.42	
Meetings of public relations committee	576.94	
Health exhibits	850.22	
Radio and television	26.00	
Film service operation	180.28	
Social security taxes	251.59	
Supplies and miscellaneous	157.79	
		5,736.02
Total		$ 20,188.52

Committee Allotments:

Public health	$ 156.59
National legislation	1,195.28
State legislation	154.47
Industrial health	174.00
Pharmacy joint committee	228.83
Medical care of veterans	184.49
Council of New England State Medical Societies	150.00
Dental conference committee	46.13
Rural health	11.55
Cancer coordinating committee	137.49
Committee on foods, drugs, cosmetics	75.00
Committee on medical economics and insurance	260.13
Maternal mortality and morbidity	34.57
Hospital committee	328.41
Medical education and licensure	44.34
Committee on third party payments	42.90
AMEF committee	266.75
Advisory committee—State agencies	84.67
Conference committee—Bar Association	175.43
Committee on accident prevention	84.77
Perinatal morbidity and mortality	29.64
Committee on eye care	55.84
Mental health	—
Committee on aging	22.42
Committee for health careers	427.17
Committee on relative value study	335.45
Total	$ 4,704.32

Building:

Taxes	$ 3,269.20
Custodial services	1,547.40
Insurance	534.44
Electricity, gas and water	1,149.35
Fuel	515.67
Maintenance of grounds	643.90
Depreciation and obsolescence	2,200.00
Supplies	185.45
Telephone	1,166.23
Repairs and replacements	542.91
Total	$ 11,754.55

Statement of Journal Operations
Year ended December 31, 1960

Income:

Advertising (net of commissions)		$53,212.97	
Subscriptions		1,564.27	
Reprints		5,434.64	
Electrotypes		640.70	
Single copy		23.00	
Roster book		290.00	
Miscellaneous		32.14	
			$ 61,197.72

Expenses:

Personal services		$15,157.34	
Manufacturing cost:			
Printing	$40,581.00		

Postage and handling	684.58		
Electrotypes	374.50		
Reprints	3,299.26		
		44,939.34	
Other:			
Printing and postage	$ 296.90		
Telephone	83.66		
Office supplies	261.70		
Editorial Board meetings	151.93		
Sales tax	19.28		
Social security taxes	239.40		
Miscellaneous	58.95		
		1,111.82	
			61,208.50
Excess of expenses over income			$ 10.78

Statement of Income and Surplus
Annual Meeting Fund
Year ended December 31, 1960

Income:		
Exhibits		$ 8,500.00
Expenses:		
Program committee and local committee on arrangements	$ 84.81	
Telephone	33.69	
School rental and janitor service	1,116.00	
Printing and postage	1,829.77	
Badges	72.52	
Exhibit decorator, rentals and equipment	1,416.40	
Meeting operating expenses	73.64	
AMA house of delegates	729.55	
Lunches and dinner expenses (guests and entertainment)	256.84	
Extra help, clerical, police, firemen	301.12	
Speakers and visiting delegates	748.22	
Council dinner	535.61	
		7,198.17
Excess of meeting income over meeting expenses		$ 1,301.83
Surplus, January 1, 1960	14,116.68	
Add, interest earned on savings account	562.06	
		14,678.74
Surplus, December 31, 1960		$ 15,980.57

State of Income and Expenses and Capital 1960 Assessment for Opinion Survey and Relative Value Study
Year ended December 31, 1960

Income:		
Assessments received		$ 14,835.00
Expenses:		
Basic survey payments	$9,000.00	
Additional tabulation and consultants' fees	250.00	
Survey consultants' expenses	540.97	
Printing	737.60	
Postage	556.22	
Telephone	91.91	
Reminder letter	251.00	
Miscellaneous	4.64	
		11,432.34
Excess of income over expenses		$ 3,402.66
Capital, January 1, 1960		—
Capital, December 31, 1960		$ 3,402.66

Notes:

1. Expenses consist of costs in connection with the opinion survey only. No expenses in connection with the relative value study were incurred in the current year.

2. It is estimated at December 31, 1960 that approximately $2,000 in additional expenses will be incurred to complete the opinion survey and that approximately $380 more in 1960 assessments will be received.

Statement of Capital
Special Funds
Year ended December 31, 1960

GURDON W. RUSSELL FUND

Balance, January 1, 1960	$ 6,632.36
Add:	
Interest received on savings account and securities	239.46
	$ 6,871.82
Deduct, disbursements for sundry items of equipment and furniture	126.23
Balance, December 31, 1960	$ 6,745.59

O. C. SMITH FUND

Balance, January 1, 1960	$ 1,453.08
Add, interest received on savings accounts	51.23
Balance, December 31, 1960	$ 1,504.31

BUILDING FUND

Balance, January 1, 1960	$152,442.51
Balance, December 31, 1960	$152,442.51

BUILDING FUND—RESERVE FOR DEPRECIATION

Balance, January 1, 1960	$ 18,559.14
Add:	
Interest on savings account	674.16
Transfer from General Fund	2,200.00
Balance, December 31, 1960	$ 21,433.30

Statement of Income and Capital
Clinical Congress Fund
Year ended December 31, 1960

Income:		
Registrations		$ 990.00
Expenses:		
Committee meetings	$ 78.03	
Speakers	522.71	
Hotel rental	300.00	
Telephone	5.61	
Printing and postage	675.25	
Projection equipment and extra help	119.99	
		1,701.59
Excess of expenses over income		$ 711.59
Surplus, January 1, 1960	$3,341.67	
Add, interest earned on savings account	93.35	
		3,435.02
Surplus, December 31, 1960		$ 2,723.43

REPORT OF COMMITTEE ON PUBLIC HEALTH

The Committee on Public Health met on the second Thursday of each month from June to February, except August, at the Society's office, and held eight meetings. Each meeting lasted over two hours and was attended by over fifty per cent of the members. The consultants' attendance was over eighty per cent. The committee deeply appreciates the attendance of the consultants who have been ever ready with their advice and wise counsel.

The Advisory Committees on Maternal and Child Health Services, H. Patterson Harris, Jr., M.D., Chairman; Technical Advisory Committee to the Crippled Children Section, Edward T. Wakeman, Chairman; Advisory Committee on Nutrition, J. Harold Root, Sr., Chairman; Advisory Committee on School Health, Joseph L. Hetzel, M.D., Chairman; Technical Advisory Committee on Hearing and Speech, Norton Canfield, M.D., Chairman, and when the latter resigned Edward H. Truex, Jr., M.D., Chairman; carried on in their fields as called upon, but found it difficult to inititate new projects.

The Committee on Public Health would welcome ideas from members of the Society, and particularly from the public health committees of the County Medical Societies, when the latter feel that this committee may be of assistance to them.

CERTAIN MATTERS CONSIDERED BY THE COMMITTEE, JUNE TO JANUARY, INCLUSIVE, 1960-61

1. Warning against elective mouth and throat operations during the polio season and setting the season July 1 to October 15 tentatively.

2. Plan for the detection of inborn errors of metabolism as presented by the State Department of Health.

3. Regional health plans for the state approved as presented by the State Department of Health.

4. Reorganization of the Society's Committee on Public Health and allied committees.

5. Prepared final draft of pamphlet on Staphylococcus Control in Hospital, prepared by personnel of the State Department of Health and others.

6. Recommended to the Council that each county medical association have a public health committee.

7. Recommended to the Council that each county medical association have a school health committee.

8. The danger of using air pressure to speed up blood transfusions was discussed.

9. Raising the pasteurization temperature so as to kill the rickettsiae of Q fever was recommended as suggested by the State Department of Health and the milk regulation board.

10. Proposed legislation from the State Department of Health in connection with regulation of private clinical laboratories was approved.

11. Approved of the use of oral poliovirus vaccine in Connecticut communities as recommended by John R. Paul, M.D., and the State Department of Health.

12. Recommended that Joseph L. Hetzel, M.D., or member of our Society appointed by him be sent to the Eighth National Conference on Physicians and Schools in Chicago, in March, 1961.

13. The Report of the White House Conference on Children and Youth is being considered by the Advisory Committee on School Health.

14. Material was sent to county medical associations on the Control of Flies; Influenza Fact Leaflet; Swimming Pool Control; and the Kings County Medical Society leaflet on County Medical Society Cooperation with County Departments of Health.

15. Material received from the U. S. Department of Health, Education and Welfare was distributed to committee members.

16. Several proposed legislative bills pertaining to health have been reviewed during the year as suggested by the State Department of Health.

17. The reports and activities of the advisory committees have been made by their chairmen at the regular meetings and discussed by the members.

The following report was received from Edward T. Wakeman, M.D., Chairman of our Technical Medical Advisory Committee to the Crippled Children Section of the Connecticut State Department of Health.

The Technical Medical Advisory Committee has not met since May 5, 1958, although there have been a number of informal conferences with Dr. George Hamilton by its chairman. The lack of meetings has been due to problems related to the reorganization of the Department of Health.

During the past year, following a meeting of a Steering Committee appointed by the Commissioner of Health, the General Advisory Committee to the Division of Crippled Children was reorganized and activated. Drs. Burr Curtis, Denis O'Connor and E. T. Wakeman of the Technical Advisory Committee are members of the General Advisory Committee. There have been three meetings of the General Advisory Committee, September 22, December 8 and February 9. One major consideration of this committee has been a survey of need and the extension of services of the Division of Crippled Children to urban areas.

The pamphlet Functions and Qualifications of the School Medical Advisor referred to this committee by the State Advisory Council on School Health for revision has been rewritten at a special work session of this committee and, with minor changes, approved by the state Council. This is a valuable guide for use by Boards of Education or Health, superintendents, physicians.

During the past year the Committee on Nutrition has, with the help of the Parent Teachers Association, made a survey of soft drinks and sweets sold in the schools throughout the state.

A pilot study has recently been made on 1,500 school children in three areas in the state to find out the kind of breakfast eaten and reasons for same. This study was done in connection with the better breakfast campaign which several nutritional agencies are considering putting on in the state.

It is hoped that the publicity regarding various phases of nutrition will continue and be enlarged upon in the future by means of television, radio, and the press.

The Maternal and Child Health Advisory Committee to the Committee on Public Health of the Connecticut State Medical Society reviewed and recommended to the Maternal and Child Health Section of the Connecticut State Department of Health a three-point program for early detection of inborn errors of metabolism: 1. The testing of infants for phenylketonuria in physicians' offices; 2. The testing of infants for phenylketonuria in well child conferences; 3. Screening of infants within the first few weeks of life for such errors of metabolism as protein metabolism, including amino acid metabolism (phenylketonuria) and carbohydrate metabolism (galactosemia and Hurler's syndrome).

Respectfully submitted,
Stanley H. Osborn

REPORT OF THE COMMITTEE ON STATE LEGISLATION

The tempo of this committee's activities rises rapidly as we enter the biennial meeting of the State Legislature at present in session. At other times we are concerned with the interpretation of current statutes or their deficiencies, and the need for legislation to meet new problems.

Last summer the Attorney General decided that podiatrists were restricted from prescibing internal medication. No new legislation has been introduced regarding this question.

On December 8, a successful Legislative Workshop was sponsored jointly by your Committees on National and State Legislation. This provided an opportunity to share experiences with AMA Representative Reuben M. Dalbec, Congressman Abner W. Sibal, State Representative Ina Vestal of Woodbridge, Health Commissioner Franklin M. Foote, and chairmen of many of our Specialty Committees. Dr. Foote presented an outline of public health bills proposed by his department. This fruitful discussion prompted a continuing partnership between the members of the National and State Legislation Committees. The former have been regularly represented at our meetings since, and have contributed considerably to the effectiveness of our deliberations. We recommend a continuation of this practice.

The implementation in Connecticut of the Kerr-Mills Amendment to the Social Security Act has been of foremost interest. House Bill 3805 is the instrument which we have been supporting in principle. Hearings before the Senate and House Committees on Public Welfare and Humane Institutions this week brought the Chamber of Commerce, Health Insurance Industry, and our organization out as proponents. There was little opposition, but the State Commissioner of Welfare warned of the large staff and difficult administration problems which he foresees in determining eligibility of the elderly applicants for medical assistance under this Act.

The Society supports a bill to allow private health insurance carriers to join in providing major medical health insurance coverage for the senior citizens of our state. Such prepayment measures will reduce the need for subsidy on compulsory government health insurance to meet the possible needs of the senior citizen who might be unable to finance a catastrophic illness.

Our Society sponsored two bills: one is the "Good Samaritan" bill providing immunity from liability to the physician who (without compensation) renders first aid at the scene of an accident; the other requires that the research findings of the Committees on Perinatal Morbidity and Mortality, and Maternal Mortality, be kept as confidential records by the State Department of Health.

We are supporting bills regarding privileged communications for physicians and clergymen. This privilege is now enjoyed only by lawyers. It is the psychiatrists, because of the nature of their practices, who feel most strongly the need to remove all impediments to the confidential physician-patient relationship. This is most necessary for a close relationship with the mentally disturbed. The fear that the awful secrets of the patient's past may some day be made public knowledge is such a real impediment.

A bill to dilute the medical representation on the Board of Directors of CMS has been introduced under the guise of "consumer sponsorship." We are opposing this.

We have declared support of many bills introduced by the State Department of Health to modernize the public health procedures and practices in Connecticut. Included in these are bills strengthening our Narcotic Control laws.

We are continuing our fight for fluoridation of public water supplies. We are in favor of correcting abuses in animal pounds and in humane saving of some of the 14,000 impounded dogs put to death each year while our medical laboratories have to risk adoption of stolen pets in their desperate search for 5,000 dogs for experimental work. A bill attempting to correct these abuses has given the anti-vivisectionists and anti-scientists an opportunity to exploit the emotions of the public. This brings great pressure on our legislators.

Rather surprisingly, the cults have not been very active at this session. One bill extending the pre-marital blood test privilege to Natureopaths has been heard by committee. No proponents appeared.

Your committee wishes to commend the Council for engaging Attorney Joseph P. Cooney as our legislative agent. His experience, astute guidance, and prestige serve us well in the deliberations of this committee as well as in the Halls of the Legislature. The magnitude of our watchdog task is apparent in the fact that there were 1,083 Senate bills and

2,319 House bills and 147 resolutions introduced at the beginning of this session.

Grateful acknowledgements are due our General Manager and his staff for efficiently carrying the burden of administration and communication so vital to success in the field of legislation. Our gratitude is expressed to those faithful members who take the time and trouble to guide us and our legislators and to offer expert testimony at public legislative hearings.

There is room for improvement in our liaison with legislators, civil servants, and with the para-medical groups and related professions. We have the will but not yet the strength or the number of volunteers.

The Women's Auxiliary to our Society do much to promote our interests and it is a comfort and a pleasure to enjoy their support and confidence.

Respectfully submitted,
Kenneth F. Brandon

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

The Public Relations Committee of the Connecticut State Medical Society continues to conduct a broad program of communications: This includes periodic releases to daily newspapers and to television and radio networks; and a health column supplied to each of the weekly papers. Pamphlets and educational material are readily made available to interested, responsible parties. Physicians throughout the state are participating in Emergency Medical Call Plans; and many others serve on the Speaker's Bureau.

The services of a lobbyist acting on behalf of the Medical Society may prove to be of inestimable value. This year the State Medical Society is sponsoring an Award to be presented to members of the Connecticut Press for meritorious medical news reporting.

The Public Relations Committee is just now engaged in developing a Communications Alliance to include representatives from various medical and paramedical agencies such as Dental and Pharmaceutical Associations, Blue Cross, CMS, and many others. Of signal importance, the Alliance is to make better use of many existing lines of communication among these groups and further to enhance rapport and cooperation among these members of the Medical Community.

Whatever our present programs or past performances, as we look ahead, we must be fresh and alert. It becomes increasingly important for us to distinguish between the time-tested and the merely time-worn. Our heritage provides us with many ideas that we may continue to cherish; at the same time, much of our thinking may be antique. We must ever be eager to acquire the newer concepts and the better methods.

But further than this, it is incumbent on us—through dynamic leadership—to initiate those programs that are responsible for progress. With this kind of positive orientation we can presume to be of even greater service than at any time before.

Respectfully submitted,
Nathaniel B. Selleck

REPORT OF THE CANCER COORDINATING COMMITTEE

The Cancer Coordinating Committee has been active and held four meetings. The attendance has been small but the interest of the members, including those who are absent, remains high thanks to the telephone. In general the meetings have been interesting and productive.

The major project for the year is the intense study of the Tumor Clinic structure in all the hospitals. In the larger ones, the Tumor Clinic is losing its identity and is being incorporated into the more general clinics. In the smaller hospitals it continues to operate and will derive support from this committee. However, Dr. Matthew Griswold has been engaged to make a thorough and exhaustive study of the Tumor Clinic problem and it is the intention of this committee to take appropriate action when the results are obtained.

The chairman wishes to thank all members for their cooperation and looks forward to another productive year.

Respectfully submitted,
William Mendelsohn

REPORT OF THE COMMITTEE ON MENTAL HEALTH

During the past year, the Committee on Mental Health has pursued its interest in narcotic control in Connecticut, though no recommendations have been concluded.

The chairman of the committee, representing the State Medical Society, attended a three-day planning Conference organized by the Department of Mental Health on February 1, 2 and 3 held in Hartford.

The White House Conference on Aging was attended by the chairman of the committee.

There is also another bill, HB 3698, which would amend the right of psychiatric patients to demand their records where the organization, whether hospital or clinic, is receiving funds from the State. It is felt very important for the continuity of treatment that psychiatric records not be readily available to patients.

Respectfully submitted,
John Donnelly

REPORT OF THE COMMITTEE ON AGING

The past year has been a particularly full year because of the planning on a local, regional and national level for the White House Conference on Aging which was held in Washington in January, 1961. Members of the committee participated in a large number of meetings organized under the auspices of various groups interested in furthering the health care of the aged.

The State Medical Society accepted the recommendation of the Committee on Aging that an informal rather than a formal State Joint Council to Improve the Health Care of the Aged should be established in Connecticut. This was achieved by inviting representatives of the Connecticut Hospital Association, the Connecticut State Dental Society and the Connecticut Association of Chronic and Convalescent Hospitals to meet with the Committee on Aging following the regular meetings of the Committee on Aging. This has provided a very good forum whereby a number of matters of common interest were brought up and plans developed to improve the medical care of the aging population. During the course of the year, the question of the establishment of a formal Joint Council has been under discussion.

Much effort was devoted to the presentation of the White House Conference on the local level. Five physicians were appointed to the Governor's Advisory Committee out of which emerged the recommendations which were to form the basis of the Connecticut Report to Washington. The final report was felt not to reflect the opinion of many members of the Advisory Committee and the position of the State Medical Society on the Section on Financing the Health Care for the Elderly was subject to much discussion.

Respectfully submitted,
John Donnelly

REPORT OF THE COMMITTEE ON THIRD PARTY PAYMENTS

The Committee on Third Party Payments of the Connecticut State Medical Society met eight times during the year 1960-1961.

On June 21, 1960 a meeting of the "Committee" was held to which representatives of all counties of the State were invited to attend and to participate. The response was excellent. Fourteen physicians, in addition to Dr. William Richards and the full complement of the State Committee, attended. The meeting was devoted in its entirety to an evaluation of the CMS "Preferred Contract."

It was unanimously voted that the Committee on Third Party Payments recommend to the Council that it recommend to the CMS Board of Directors that a recognized relative value scale be used by the Medical Advisory Committee as a guide for correcting and avoiding inequities in the payment schedules of CMS contracts.

On August 10, 1960, the Committee on Third Party Payments reviewed the document titled "Some Guiding Principles on Financing Health Insurance for the Medically Indigent" and the attitudes expressed to this committee by certain congressmen and senators regarding this document.

On September 19, 1960 another state-wide meeting was held for the purpose of reviewing the policies and practices of the Connecticut State Welfare Department. Dr. Edwin Connors, Medical Director of the Department, was the guest invited to outline the activities of the Department regarding medical care.

On January 18, 1961 the committee reviewed the projected Community Contract of the Connecticut Medical Service, Inc. All members of county Third Party Payment Committees were invited and representatives of four counties were present.

The "Committee" made no attempt to review the payment schedule which accompanies the proposed contract. The committee feels that the individual physician must judge for himself the adequacy of the payments in the light of his own practice.

In brief the following recommendations were made to the Council:

1. Wherever the term *fee* or *fee schedule* appears the term *payment* or *payment schedule* be substituted.
2. The committee recommends that a specific statement be included to the effect that "No medical payments will be made for the care of the 'well newborn'."
3. The term non-profit general hospital be amended or modified. This broad exclusion should not appear in the contract.
4. The committee recommends that the premature infant be classified as a sick newborn, and a definition of prematurity be included.
5. The committee recommends that payments be made direct to all physicians, whether they are participating or not, on proper assignment by CMS subscribing members.
6. The committee recommends, that when approved, the Community Contract remain in force for two years and then be subject to review.
7. The committee recommended that the proposed Community Contract be approved by the House of Delegates and that the six preceding recommendations be negotiated by the Society and CMS representatives.

Respectfully submitted,
Max Alpert

REPORT OF THE JOINT COMMITTEE OF THE CONNECTICUT STATE MEDICAL SOCIETY AND CONNECTICUT PHARMACEUTICAL ASSOCIATION

The Joint Conference Committee continues its fine work of the past by discussing and resolving several important matters of interprofessional problems affecting members of the medical and pharmaceutical professions.

A considerable amount of the discussions this past year involved directives sent to both professions by the State Welfare Department especially as they pertained to the prescribing of drugs by generic name. An effort was made during the year to resolve some of the criticisms, thoughts, and problems on this subject by joint meetings with the State Welfare Commissioner and some of his advisors in addition to the State Welfare Medical Director.

The members of this committee are to be commended for their excellent attendance with almost 100% participation at each of the meetings.

It is recommended that this committee be continued and that the number of physicians appointed to this committee be reduced from seven to six in order to conform with the same number of pharmacists.

Respectfully submitted,
Walter J. Keefe

REPORT OF THE COMMITTEE ON NATIONAL LEGISLATION

In the 86th Congress there were almost 20,000 bills introduced of which 750 affected medicine. As of the date of this writing 7,000 bills have been introduced into the 87th Congress so far with more than 300 affecting medicine—this gives the reader some indication that medical legislation is increasingly occupying the attention of our legislators—national as well as local.

This report will be concerned with what seems the most important issue discussed below, but must mention in passing also legislation concerning Nursing Home Facilities and Services, Medical School Aid, Establishment of a National Institute of Child Health and Human Development, Expansion of Medical Research Construction facilities and funds and Vocational Rehabilitation as well as the Javits Bill to provide federal matching funds to states that set up plans to help eligible persons over 65 to buy health insurance.

A very important piece of legislation affecting physicians in the 86th Congress was the Forand bill to give medical care to the aged, financed through Social Security. The defeat of the Forand bill in the rump session came only through the strenuous efforts of its opponents and the passage of the Kerr-Mills Medical Aid for Aged law financed jointly by federal and state funds was a victory for the people of the country.

A detailed analysis of these bills would take too much space but this is a quick rundown on one of the bills—HR 4222, S-909, introduced by Representative Cecil King of California and Anderson of New Mexico. This bill would amend the Social Security law by adding a new title under which inpatient hospital services, skilled nursing home services, home health services and outpatient hospital diagnostic services would be provided to any individual over age 65 who is entitled to monthly insurance benefits under the Social Security Law or under the Railroad Retirement Act. *Services:* Up to 90 days of inpatient hospitalization in semiprivate accommodations (two, three or four bed) subject to a deduction of $10 for each of the first nine days of hospitalization, with a minimum deduction of $20.

Up to 180 days of skilled nursing home services, but the combined inpatient hospital services and skilled nursing home services could not exceed 150* units of services furnished during a "benefit period."

Home health services up to a maximum of 240 visits during a calendar year.

Outpatient hospital diagnostic services subject to a deductible of $20 for each complete diagnostic study.

A comparison of this bill to the Kerr-Mills bill shows that Kerr-Mills would furnish full medical care to all needy and near needy citizens over 65 including hospital and nursing home care, drugs, services of physicians and anything else required whereas King's or Anderson's bill also would restrict benefit to hospitalization, nursing home and home nursing cares and would be available only to those over 65 who qualify for other Social Security benefits and whether they need financial help or were millionaires makes no difference. The poor and destitute who have not or cannot qualify for Social Security are left out entirely in the King and Anderson proposals, furthermore the $10 per day that each hospitalized patient would be required to pay for the first nine days would work a hardship on those least able to afford it, but those who could afford to pay all their own expenses would pay the $90 and get a free ride for all the rest of their hospital charges—and the working people of America would pick up the tab.

Those in favor of the Social Security approach attempt to define it as "prepayment" of insurance for future benefits which of course is an absolute falsehood that even the United States Supreme Court has clearly stated "that Social Security contributions are taxes and are not insurance premiums" so that the actual fact of the matter is that taxes on workers' incomes would provide the money for current benefits to aged beneficiaries in this type of bill.

One fact not generally publicized enough, I believe, is that many working people with large families already pay more Social Security taxes than federal income taxes and they will pay even higher Social Security taxes under existing programs to say nothing about adding medical care of the aged into the system—a system which incidentally has been running in the red since 1957 when there was a net decrease of 126 million in assets. In 1958 there was net decrease of 528 million and in 1959 a net decrease of $1,724,000,000 so that the total assets of the Old Age and Survivors Insurance Trust Fund have dropped from $22,519,000,000 in 1956 to $20,141,000,000 in 1959. It must be remembered that this happened in spite of a 4% rate in 1956 (2% employee and 2% employer) on taxable income of $4,200 in 1956 to 6% (3% employee and 3% employer) taxes on a taxable income base raised to $4,800 in 1960!

So in spite of a 50% tax rate rise in 4 years plus a 14% rise in tax base the fund decreased over 10% in worth with a yearly mounting deficit of 300% over each previous year since 1957. At this present rate of decline the fund would end up as a total deficit in a few years requiring future years' income to meet previous years' payments. (How long could you get by, doctor, by pledging the grocer next year's income to pay for last year's food?) What would happen if the fund is saddled with the added deficit bound to result from medical coverage? This is just a matter of arithmetic based on the "Statistical Abstract of the United States 1960" and it is interesting to see how quiet Walter Reuther and Wilbur Cohen become when this is mentioned.

By toning down the language of the Forand Bill of 1960 and eliminating some of the objections thus making it apparently more acceptable, the proponents of the Social Security approach hope to overcome the label "socialized medicine," *but* they expect to get the *principle of government's responsibility for individual health established*—then later move for expansion and finally achieve a fully socialized medicine system in America. If Kennedy, King, Cohen and Ribicoff succeed in getting the principle of government intervention in individual health matters accepted this year or next or any time, then the old "foot in the door" technique takes over and remember the Supreme Court of the United States has ruled "*that which the government subsidizes, it can control.*"

Let me quote you *Human Events,* March 24, 1961—"physicians better get busy and exercise their basic citizenship responsibilities and oppose all foot-in-the-door plans for socialized medicine, for if the King 'Kennedy' Cohen proposals are passed, physicians will be up to their stethescopes in politics—whether they want to be or not. It will be too late for them then. Socialized medicine is bad medicine and should not be prescribed. The medical profession, as a group of citizens, ought to fight political quackery as strongly as it fights medical quackery."

There's one thing you can do, doctor, write cards and letters to your Congressmen and Senators and get your patients, friends, wives and neighbors to do the same—or you'll have no heritage to leave your sons and daughters.

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*A unit of service would be equal to one day of inpatient hospital services or two days of skilled nursing home services. Thus, an individual who remained in a hospital for 90 days would be eligible for an additional 120 days of skilled nursing home care after his hospitalization.

Remember Lenin said "Compulsory health insurance is the keystone to the arch of the socialized state" and you might remind your friends and associates that if medicine falls, they may be next in line. For those who think the State is getting something for nothing, I believe Senator Barry Goldwater pointed out that in New Jersey, for example, for every $1.47 given to the Federal Government, the State got only $1 worth in return—who in his right mind believes Connecticut would do better than this?

We can only lose this battle once and then the die is cast. Will you do your share to help yourself and the American people who are caught in the middle and don't know the consequences because you haven't told them, but have allowed your opponents to mislead them? The answer lies in your office—not the other fellow's.

Respectfully submitted,
Clifford W. Mills

REPORT OF THE COMMITTEE ON STATE BLOOD BANK

At this time last year there was no full time director of the Connecticut Regional Blood Program with a medical degree. Fortunately, Dr. R. E. Kendall, who has been associated with the state blood bank since its inception, agreed to assume the direction of the medical portion of the program. The administrative details were in the hands of Mr. Cyrille LeBlanc. During this period, Mr. A. P. Ricci was hired as administrative assistant and on Mr. LeBlanc's resignation in August, assumed his duties.

After a brief period, during which your chairman assumed some of the medical duties, Dr. J. C. Early assumed the directorship of the program on September 1, 1960.

The nearly nine month period during which there was no full time medical director is believed to have emphasized the importance and uniqueness of this program to the physicians and their patients in this State and to local and National Red Cross. It is important to us to briefly review what the Regional Blood Bank is doing and what it may be doing.

During the last five years, blood, in units of 500 cc., has been used in the State thus:

YEAR	IN STATE
1956	72,783
1957	76,178
1958	78,191
1959	78,085
1960	79,497

It would appear that usage has leveled off at a little better than 78,000 units a year since 1958 as the 1,400 unit increase in 1960 over this level is more than accounted for by the 97 open heart operations, each of which averaged about 15 units.

During the last two years blood was collected thus:

YEAR	1959	1960
Blood mobile	85,449	86,479
In hospital	8,761	9,310
Totals	94,210	95,789

What happened to this blood, over use as whole blood? For the period June 1959 - June 1960, in units, use was:

Sent out of the State for use of Connecticut residents	2,208
Sent to National Institute of Health	28
Converted to liquid plasma	11,136
Converted to fresh frozen plasma (hemophilia)	736
Unfit for use	777
Total	14,885

The problem of obtaining this blood has been assumed by your local Red Cross Chapter. They deserve your help, please work with them.

What are some of the problems after a person, willing to donate, presents themself and the blood is or is not taken?

An average of 16% of donors each year have never given blood before. Donor reactions of such severity as to stop the taking of blood averages 2.2%.

Distribution of blood groups, as donated in this State is as follows:

Group	Rh	%	Total
Group A	Rh positive	33.6%	
	negative	6.3%	
			39.9%
B	Rh positive	10.0%	
	negative	1.8%	
			11.8%
AB	Rh positive	3.9%	
	negative	0.7%	
			4.6%
O	Rh positive	37.1%	
	negative	6.6%	
			43.7%

However 48.1% of blood given to patients is Group O. Some of this discrepancy is accounted for by the use of group O for patients with other types, (in 1960, 272 units of O Rh negative blood, exclusive of that for infant exchange, and 252 units of O Rh positive blood were so used) but this is not the whole answer. The shortage of O Rh negative is also made worse by the outdating of such blood, 380 units were outdated last year.

Injudicious use of blood is still a problem. The one unit transfusion, particularly during surgery, has been pointed out as dangerous in previous reports. One recent article, F. H. Allen, N.E.M.J. 18:273, points out that it is safer for a person with 11 Gm. % hemoglobin to give a unit of blood than to receive one.

This brings us to the possibility of transmission of hepatitis. To protect recipients any donor implicated in a case of hepatitis is automatically excluded for use as whole blood but his donation is used for some of its fractions.

A special roster of rare donor types is set up and being expanded to care for problems in obtaining such blood.

This is a necessarily brief look at your blood bank. You are going to be asked for more help in the running of your blood bank.

Respectfully submitted,
John E. Thayer

REPORT OF THE COMMITTEE ON MEDICAL CARE OF VETERANS

Two meetings have sufficed to care for the business of this committee during the year. At each, further revision of the V.A. fee schedule was made. These recommended changes were sent to the Council through the Committee on

Third Party Payments on October 20, 1960. It is assumed that from the Council the recommendations were sent directly to the V.A. regional office in Hartford. We have not yet been informed about the final decision.

The Resolution from this committee, approved at the last annual meeting of the House of Delegates, that the U. S. Congress be requested to investigate the entire V.A. Veterans Care Program, has borne some results. Several State Medical Societies (all of whom received copies) have voiced their approval and support. A full page spread was devoted to the subject by the *New Haven Register*, Sunday, January 29, 1961. It will undoubtedly take time, but we'll get some action, let us hope in the not too distant future.

Respectfully submitted,
George A. Buckhout

REPORT OF THE COMMITTEE ON RURAL MEDICAL SERVICE

The major project of this committee, as in the past. has been the sponsoring, in conjunction with the Committee on Public Relations, a health exhibit which was shown at eight county and regional fairs this past fall. Our committee is indebted to the Woman's Auxiliary of the State Medical Society for setting up and manning these exhibits.

During the fall, the Extension Service of the State University at Storrs asked the chairman's cooperation in publishing a directory of State poison control centers to be issued to farm people and others handling toxic chemical materials. This was done, incorporating the proper instructions to call your own doctor first.

There have been no formal meetings of this committee in the past year, but the chairman has been asked to help prepare a questionnaire and interview schedule on "The Use of Health Care Practices in Selected Rural Connecticut Communities," for the Department of Rural Sociology at Storrs, and the U. S. Department of Agriculture. This is still in the formative stage and will be further revised in the future.

This committee, in conjunction with other similar committees of New England State Medical Societies, is again sponsoring for the sixth consecutive year the Annual New England Rural Health Conference to be held this year in New Hampshire. Your chairman was privileged to attend the National Rural Health Study Conference in Chicago in February, where our New England Regional Conference was praised as a pilot program for similar regional programs throughout the country. Attendance at such a national meeting enables one to grasp some of the magnitude of the problems faced by many of our western states in securing good medical and health services for their rural populations; and it makes one doubly resolved to cope with our comparatively easier problems in the best possible way.

Respectfully submitted,
Gaert S. Gudernatch

REPORT OF THE COUNCIL OF THE NEW ENGLAND STATE MEDICAL SOCIETIES

The Council of the New England State Medical Societies is a Council designed to bring to the fore matters which are for the best interests of medical care in the New England States. Your delegates attended the meetings on April 24, 1960 and September 25, 1960.

The most important matters discussed at the two meetings were:

1. The report of a committee pertaining to the establishment of a New England Physician's Retirement and Investment Plan.
2. Medical education.

It was the consensus that some type of enabling legislation, which would permit physicians to lay aside funds for their retirement, may be passed in the Congress.

A Medical Economics Committee, composed of the chairmen of similar committees of the New England State Medical Societies, was established to study and make recommendations relative to the establishment of a New England Physician's Retirement and Investment Plan. Dr. Deren of Connecticut was made its chairman. At the September meeting, Dr. Deren presented one of the finest reports on the Retirement Plan we have ever heard. The entire Council applauded him and approved his report with recommendations that it be presented to the various New England State Medical Societies for their considerations.

Medical education, both under-graduate and post-graduate activities were discussed. It was interesting to note from the panel discussing under-graduate education that many of our present medical schools are expanding their facilities to meet the greater need for physicians. In addition, new schools are being proposed.

Post-graduate medical education was a topic of much discussion. This centered around the New England Post-graduate Medical Assembly, which has in the past, been conducted by the Massachusetts Medical Society. It was proposed that the New England Council take over the responsibility for sponsoring and conducting this Assembly. The representatives of Vermont, New Hampshire, Maine and Massachusetts especially, favored such an undertaking. The representatives of Connecticut and Rhode Island did not feel the Council was in a position to assume this responsibility. Dr. Deren moved "to have the Council of the New England Medical Societies take over the running of the New England Graduate Assembly if the respective six state medical societies, approved such action." This motion was voted upon and passed.

Respectfully submitted,
Oliver L. Stringfield
Senior Member

REPORT OF THE COMMITTEE TO STUDY MATERNAL MORTALITY AND MORBIDITY

The committee held six regular meetings during the calendar year 1960, all of which were well attended.

No open meetings were held in 1960.

The provisional maternal mortality rate for 1960 is 1.8 per 10,000 live births (10 maternal deaths reported to the public health statistics section, State Department of Health). The maternal mortality rate for 1959 was 2.7 per 10,000 live births (15 maternal deaths reported), as compared with a rate of 2.3 for 1958 (13 maternal deaths reported).

Number of deaths among women who were pregnant reviewed by the committee (some of these cases are from previous years)	23
Deaths due to non-maternal causes	2
Deaths due to maternal causes	19
Direct	15
Indirect	4
Unclassified	2

Discussions were held on influenza in pregnancy and the use of influenza vaccine with the help of invited physicians.

Because of its interest in the care given to prenatal patients in clinics, the committee recommended that the maternal and child health section of the State Department of Health make a study of the prenatal clinics in Connecticut. The study has been carried out and findings have been reported to the committee for its review and recommendations.

A subcommittee has been appointed to prepare cases for publication in the *Connecticut Medicine*. Some cases have already been prepared and are ready for publication.

Respectfully submitted,
Hugh K. Miller

REPORT OF THE ADVISORY COMMITTEE TO THE STATE COMMISSIONERS OF WELFARE FINANCE AND CONTROL

On July 1, 1960, Dr. Edwin Connors of Bridgeport, who had been chairman of this committee for 6 years was appointed Medical Director of the State Welfare Department, and resigned from this committee post. At the Council meeting of August 10, 1960, Dr. Edwin Trautman of Trumbull was appointed as chairman, and in order to make use of Dr. Connors' valuable experience and guidance, he was asked to continue as a member of this committee, which advises and assists the Commissioners of Welfare and Finance and Control in the operation of the State Welfare program—a program that will call for an appropriation from the Legislature of approximately 30 million dollars for the next two years for the total medical program.

This committee is intimately concerned with the interpretation of the purposes and policies of the medical care program to the medical profession and to each practitioner emphasizing the broad concept of responsibility in the expenditure of public funds, and of allowing only essential medical care paid for at reasonable rates. Limitation in expenditures is not the decision of the State Welfare Department or any of its personnel, but rather the interpretation by the Attorney General of the statutes governing the administration of the medical care program. Inability to pay for other than what is reasonable and necessary medical care is not a dictation to the medical profession on the part of any of the personnel of the welfare department.

This committee represents the medical profession and the Commissioners of Welfare and Finance and Control represent the State Departments responsible for administration of the program. By a meeting of minds, maintenance of a medical care program that meets the objectives of both the profession and these departments of the State Government can be achieved. Many physicians do not understand the limitations of the program or fee schedules, and this leads to poor relationship between the profession and the Welfare Department. The Commissioners need and welcome the recommendations of this committee to make sure that all aspects of the medical care program are conducted on a sound professional, ethical and economical basis. For this goal, the Medical Advisory Committee is always available to receive and act upon any related problem presented to it by the doctors of the state, by the para-medical agencies, or by the personnel of the Welfare Department.

On September 21, 1960, this committee met and were familiarized by a memo from Dr. Richards, General Manager of the Connecticut Medical Society, dated March 10, 1960, requiring all action taken by the various advisory committees of the Society to be transmitted to the Council for approval and then to the entire membership of the Society. This will avoid any possible embarrassment to the Society in the matter of approving policies, as well as the actions of allied agencies. The resolution passed by the House of Delegates in April, 1960 requiring all fee schedule changes with third parties to be submitted to the Third Party Payments Committee before becoming effective, was re-emphasized.

The functions of the Medical Advisory Committee were carefully reviewed for the intelligence of new committee members and discussed at considerable length.

A list of "trade names and generic names of drugs" was presented by the new Medical Director with its revisions, and the reasons for specific inclusions or exclusions on a cost basis were discussed.

Considerable correspondence from private physicians with problems, complaints or recommendations was meticulously discussed in relation to established welfare program policies, and the committee's decisions have been transmitted in each specific case. In general, these communications have dealt with prescribing of expensive medications, drugs still in the research or experimental phase, requests for medical services or supplies not authorized by welfare policies, payment for x-ray services rendered by other than a radiologist, unusual frequency of prescription writing in some convalescent hospitals, and services rendered to welfare patients in hospitals.

The committee further decided that in the cases of abuses of the medical care program by private practitioners, the Medical Director should contact the physician in question for an explanation of the alleged abuse. If such explanation was not forthcoming or was still not satisfactory, such an individual would be further contacted by the Medical Advisory Committee for a satisfactory explanation. If the matter was then still unresolved, the case would be referred to the proper County Society Committee on Ethics and Deportment for appropriate action. In practice, the Medical Director has had to act in three such cases thus far, and has achieved an acceptable understanding.

The proposal to establish County Medical Advisory Committees was rejected by this committee since it was felt that there was not sufficient volume or need for such subcommittees, and that there already existed the previously mentioned County Committees on Ethics and Deportment to handle extreme abuses on the local level.

The recommendation that a revision of the fee schedules for practitioners of the Healing Arts and allied professions be undertaken was approved by the committee. The present existing schedule became effective March 1, 1957 and such a revision now was deemed logical and realistic. The Relative Value Study undertaken some time ago by the Medical Society has apparently moved in very low gear up to this time, and cannot be counted upon for any assistance in the immediate future. This committee, therefore, felt that it should initiate the study of increased fees for medical services to the beneficiaries of welfare assistance without additional delay.

Considerable careful preliminary exploration of the added cost of this revised payment schedule is currently being done by the Internal Audit and Statistics Sections of the Welfare Department. Tentative fee schedule changes for general practitioners, specialists, surgical services and laboratory charges have already been received. The preliminary proposed increases for general practitioners and specialists are approximately one-third higher than existing rates. The actual expenditures for physicians' services in 1960 for Public Assistance beneficiaries was $837,224. In addition, the estimated cost for physicians' services for Child Welfare was approximately $25,000.

Additional meetings must be scheduled and considerable work still remains to be done before any final concrete revision is ready for presentation to Third Party Payments Committee and subsequently to the State Commissioners. At the time of this report, it would, therefore, be presumptuous to attempt to predict the effective date of a new schedule.

Respectfully submitted,
Edwin F. Trautman

REPORT OF DELEGATES TO CONNECTICUT NUTRITION COUNCIL

A great deal of the work of the Connecticut Nutrition Council has been in an advisory capacity. Some of our members are serving on the Advisory Committee on Nutrition to the Connecticut State Medical Society. Others are on various of the Governor's Committees, and still others advising school superintendents, P.T.A.'s, and other organizations. Some of our members have submitted papers on Nutrition which will be published in *Connecticut Medicine*. Others have written reviews of books on Nutrition which are available to medical personnel. This committee is especially interested in combatting medical faddisms and misinformation. A review of the new book by Dale Alexander called "Good Health and Common Sense" shows that it might better be titled "Good Health Through Nonsense." The committee is now preparing a release on liquid foods which is timely.

At the request of the President of our Council, Governor Ribicoff appointed one of our members to his Advisory Committee on Aging. Plans were made for a series of Nutrition radio and television talks by prominent radio personalities including Bernard Mullens, Frank Atwood, and Kathy Godfrey. A puppet show concerning Nutrition was very successful and was arranged for by several of our members. Considerable correspondence between the Connecticut Nutrition Council and Congressman Robert Giaimo described to us the status of recent legislation affecting the School Lunch Program. We received many letters of appreciation for our Resolution regarding the continuation of the School Lunch Program in Connecticut. Some of the prominent people who sent in their letters of appreciation were William J. Saunders, Commissioner of Education, Congressman Frank Kowalski, and Senator Prescott Bush. Several members of the Connecticut Nutrition Council are acting as judges for the Exhibits on Nutrition of the Northern Connecticut Science Fair; among them Dr. Max Caplan. A Southern Connecticut Science Fair is also under consideration and when plans are formulated we expect that we shall judge the exhibits there too.

Respectfully submitted,
Max Caplan

REPORT OF REPRESENTATIVE ON ADVISORY COMMITTEE ON FOODS AND DRUGS

This committee meets regularly six times a year. Meetings are very well attended by representatives of other component societies. The committee considers a variety of problems most of which have to do with drug hazards and labelling.

Respectfully submitted,
Hugh L. Dwyer

REPORT OF COMMITTEE TO STUDY PERINATAL MORBIDITY AND MORTALITY

The committee has met regularly and has embarked on a program evolved from work of the past two years.

Several members of the committee spent a full Sunday in Boston at a regional AMA Meeting on Perinatal and Maternal Morbidity and Mortality.

On the basis of recommendations from this meeting, the committee asked the Council to approve proposed legislation already in effect in Minnesota, South Dakota, California, Ohio, and Michigan assuring the confidentiality of records used in perinatal and maternal studies. The Council approved the matter; the Committee on Legislation prepared the bills and they were duly submitted. The chairman of the committee, Dr. Davis from the Maternal Mortality Committee; Dr. Snoke from the Connecticut Hospital Association; and Dr. Spekter from the State Department of Health, as well as others, testified before the Committee on General Law.

The committee has attempted to familiarize the State with the American Medical Research Foundation Study on Perinatal Morbidity and Mortality. This is currently being done in Greenwich Hospital, St. Raphael's of New Haven, Stamford Hospital, and New Britain General Hospital.

The committee is presently engaged in setting up a study sheet for the study of 75 randomly selected perinatal deaths from throughout the State which will be studied anonymously by the committee. The committee wishes at this time to request your wholehearted support of this vitally important clinical research and study program.

A fall meeting was held, to which representatives of all hospitals were invited. This was a well attended meeting. A spring meeting will also be held. Regional panel meetings are in the planning stage; in the Stamford, Greenwich and Norwalk area, the date is already set.

Respectfully submitted,
Roswell D. Johnson

REPORT OF THE REPRESENTATIVES TO THE CONNECTICUT HEALTH LEAGUE

Only one meeting of the Connecticut Health League was held this year namely on June 2, 1960 at the New Haven Medical Association quarters.

The meeting was devoted to a detailed description of the reorganizational structure of the Connecticut State Health Department by Dr. Franklin M. Foote, State Commissioner of Health. A lively question and answer period followed.

Respectfully submitted,
Clement F. Batelli

REPORT OF CONFERENCE COMMITTEE WITH STATE BAR ASSOCIATION

Three meetings of the Conference Committee with the State Bar Association were held at the Lawn Club in New Haven in 1960.

The first meeting, January 14, 1960, concerned the implementation of setting up local medicolegal committees, and the distribution of the "Principles for Cooperation" of the Connecticut State Medical Society and the Connecticut State Bar Association. The possibility of a further printing was to be investigated. Dr. Louis Spekter who was present by invitation from the Committee on Accident Prevention of the State Medical Society, discussed the efforts of that committee to obtain legislation under which a specific level of alcohol in the body would raise a presumption of intoxication. The necessity for such a law was unanimously favored by both the medical and legal group.

The second joint meeting was held on April 13, 1960. Members from the Accident Prevention Committee were again present and further discussion of legislation concerning intoxication while driving an automobile was discussed. By a vote of 15 to 1, the committee went on record as favoring the principle of "implied consent" adopted in a number of states.

Dr. Averill Liebow discussed the importance to the medical profession of obtaining passage of an adequate "pound law" dealing with the humane use of animals.

The next meeting was held on October 27, 1960. Blood test legislation was again discussed. It was agreed that both the medical and legal committees would recommend to the legislative committees of both societies that a law of "implied consent" should be supported.

The question of appointment of medical experts by the court was discussed. It was felt that court-appointed impartial experts would be a progressive step forward in the settlement of liability and compensation cases. This matter is to be discussed more fully at the first meeting in 1961.

Respectfully submitted,
Peter V. C. Dingman

REPORT OF THE COMMITTEE ON ACCIDENT PREVENTION

Since the last annual report, meetings of the committee have been held in March, September, November, 1960 and January, 1961.

THE GOVERNOR'S CONFERENCE ON TRAFFIC SAFETY, "CIVIC ACTION FOR TRAFFIC SAFETY"

Dr. Rogowski was member of the panel entitled, "What is Known about the Physical and Mental Factors in Traffic Accident Causation?" A number of the committee members attended the conference.

A letter from the Assistant Director of the American College of Surgeons commended the committee for the work it is doing with respect to plans regarding the program for ambulance drivers and attendants, as transmitted through Dr. Strayer, chairman of the Connecticut Committee on Trauma of the American College of Surgeons.

ACCIDENT PREVENTION STUDY

Dr. Clement Clarke, a member of the Committee on Accident Prevention, is a liaison member to the advisory committee to the study. This is a joint undertaking of the Connecticut State Department of Health and the Department of Motor Vehicles and the U. S. Public Health Service which purpose is to study those physical, mental and psychological conditions that might relate to motor vehicle accidents.

Upon the recommendation of the committee to the state commissioners of health and motor vehicles, the trailer in which the examinations were to be made was exhibited at the annual meeting in order that physicians may become intimately acquainted with the study as they passed through the trailer.

MINIMUM STANDARDS FOR AMBULANCE SERVICES

Minimum standards were developed with the cooperation of ambulance groups and with consultation from the Connecticut Committee on Trauma of the American College of Surgeons. These standards are to be published and disseminated to all persons concerned with ambulance services.

LEGISLATION

Bill No. 2187—"An Act Concerning Operation of Motor Vehicles while under the Influence of Intoxicating Liquors or Drugs" is a bill somewhat similar to one recommended for passage by the committee two years ago. The committee now recommends that this bill be approved in principle, and in addition that two further provisions be incorporated, namely the "implied consent" clause, and that tests should be supervised by the laboratory of the State Department of Health or to be done in laboratories approved by the State Department of Health.

The committee has spent a good deal of time both in committee and with the Joint Conference Committee of the Connecticut State Medical Society with the Connecticut Bar Association. In discussing the medical and legal aspects of such a bill much progress has been made in reaching the conclusion that such a bill is an important part in the total traffic safety program.

Representatives of the County Medical Associations to the committee have been a part of the committee. As yet the local safety councils and committees have not called upon their services. It is anticipated, however, that through the educational program of the Connecticut Safety Commission, the value of medical advice to the local safety councils and committees will be made clear.

DRIVER EDUCATION PROGRAM

The committee, through Dr. Cary, representative from the New Haven County Medical Association, has indicated to the State Department of Education the interest of the committee and of the Society of Automotive Medicine (of which he is a member) in the medical aspects of driver education.

ROLE OF DIRECTORS OF HEALTH IN TRAFFIC SAFETY

A member of the committee, Dr. Gudernatch, who is also director of health of Sharon, presented a paper to the directors of health of Connecticut on their role in highway safety. This article was published in the *Connecticut Health Bulletin.*

EXHIBIT

With the cooperation of the Automotive Crash Injury Research Project at Cornell University, an exhibit on automotive safety was presented at the annual meeting of the Connecticut State Medical Society.

PREVENTION OF HOME ACCIDENTS

The committee has considered highway safety almost exclusively since its inception. At this time the committee plans to spend more time on home accident prevention. The question was raised, "Where shall we begin?" Since one of the committee's first activities was related to defining the role of the practicing physician in highway safety, it was thought that perhaps the committee could try to define his role with respect to home accidents. With this in mind, the committee reviewed and recommended that a series of leaflets prepared by The Accident Prevention Committee of the American Academy of Pediatrics be distributed to physicians of Connecticut by the Connecticut State Department of Health so that they may use them in their practice.

Respectfully submitted,
Louis Spekter

REPORT OF ADVISORY COMMITTEE ON MEDICARE PLAN

During the year 1960, which is the fiscal year, it is seen from the reports coming from the Fiscal Administrator that Medicare claims in the State number 4,096. Listed below in their report was a factual report of the claims as administered by the Connecticut Medical Service, Inc., who are Fiscal Administrators of Medicare for the State of Connecticut.

Claims received	4,096
Claims paid	3,851
Amount paid (net)	$300,019.62
Claims rejected	184
Claims voided (duplicators)	3
Claims returned to doctors (Incomplete forms plus 1/1/60 requirements, i.e., permits, statements, etc.)	1,909
Claims outstanding December 31, 1960	33
Claims referred to State Committee	90
Claims referred to Washington	153

Dr. Robert Hart of Hamden was appointed Acting Coordinator and Reviewer of the claims and has done an outstanding job during the year.

Floyd L. Wergeland, Brigadier General, MC, Executive Director, Office for Dependents' Medical Care, informed the Society that his office is extremely proud of the manner in which the program has been accepted and supported by civilian physicians and hospitals, and they are cognizant of the fact that such acceptance would not have been possible but for the highly efficient and conscientious manner in which the medical society and fiscal administrator have administered the program. For this, they are deeply appreciative.

Respectfully submitted,
Henry A. Archambault

REPORT OF THE COMMITTEE ON CONNECTICUT HEALTH CAREERS

This year the Health Careers Committee was expanded to include a minimum of one representative from each county. At a meeting in October, new committee members were made acquainted with the brief history of the Health Careers movement in Connecticut to date. Plans were then formulated for improving in quality and increasing in number, Health Career programs in secondary schools within each county.

Two areas of responsibility were acknowledged by the committee: first, conducting or assisting the Auxiliary in conducting broad general Health Career guidance programs in public, private and parochial secondary schools throughout each county; second, recruitment of superior students in the college preparatory courses for the career of medicine itself.

Within the first area, a general format was agreed upon for continuing the joint approach with the county Auxiliary representatives. The plan is for Auxiliary representatives to contact guidance teachers and principals and arrange for introductory assembly programs primarily beamed at the junior class within each secondary school. It was agreed that the film "Helping Hands for Julie" constituted the best audio-visual core material for these programs. It was further agreed that this should be reinforced by a panel consisting, wherever possible, of a local physician and approximately three uniformed representatives of various other special Health Careers, such as Nursing, Medical Technology, Dietetics, X-ray, Physical Therapy, Occupational Therapy or Medical Secretarial Science.

It is appreciated by this committee that without adequate supplies of trained and trustworthy technical assistants, physicians can scarcely do justice to any form of medical practice today. It seems beyond question that the responsibility for filling the ranks in these allied Health Careers via AMA approved training schools rests squarely upon the physicians themselves.

It is apparent now that we have the tools at hand with which to discharge two areas of responsibility viz.—Health Career Guidance and Physician Recruitment.

Needed to use these tools effectively throughout the State are: First an awareness by the physicians of Connecticut that there is a real need for this program. They must realize that adequate patient care demands an adequate supply of physicians, and as well an adequate supply of acceptably trained and thoroughly responsible technical assistants. They must further realize that it is highly unlikely that any other than the physicians will assume these responsibilities. The experience of this committee indicates that attention to these needs by the physicians themselves constitutes the best type of public relations. An important segment of the public, parents, school children, teachers and others in all walks of life are given a new awareness that physicians are manifestly interested in the future of medical care. On the other hand, should the public become aware of failure of physicians to participate in and support such programs as this, only the worst type of public relations can result. Physicians must acknowledge these responsibilities by volunteering their time and money to support this program.

The present system of Auxiliary approach to this program must be revised. The program suffers by having a high rate of turnover in Auxiliary representatives, presently being appointed annually by each county president. It would seem desirable for the Auxiliary to change to a State appointed committee in which each county has approximately proportional representation and which would continue from year to year, with as little change as possible. It remains to be seen whether even operating as a Statewide committee, volunteers can be expected to schedule and otherwise attend in meticulous detail to the programming in all secondary schools throughout the State.

If the physicians of the Connecticut State Medical Society would come forward and volunteer, each to conduct one such program in a public or private school within his neighborhood, we believe the success of the program would be assured. Adequate secretarial help would fulfill the remaining need.

It is requested that Medical Society members reading this report drop a card to the State Medical Society office volunteering the name of the secondary school which they attended, secondary schools in which they have or have had children in attendance and secondary schools in their neighborhood at which they would be willing to appear as representatives of this program. There are only 182 schools in this category in Connecticut. There are over 3,300 members of the Connecticut State Medical Society. We believe that there are enough members of the Society who can conduct a high school assembly program to cover all secondary schools in Connecticut annually, and they will when the need is pointed out to them.

Respectfully submitted,
Bernard F. Mann, Jr.

REPORT OF THE REPRESENTATIVES TO THE CONNECTICUT ADVISORY SCHOOL HEALTH COUNCIL

The Connecticut Advisory School Health Council has held monthly meetings since September 1960, all of which have been attended by one or more of your delegates to the Council. The first two meetings dealt with orientation of new members of the Council, the reading of reports of some of the subcommittees, and the assignment of the members to various subcommittees. Dr. Frank W. McCarthy, Jr., was appointed to the subcommittee on "Fostering School Health Councils," and I was assigned to the subcommittee on "Mental Health."

The following items were discussed or presented at subsequent meetings that relate to the Connecticut State Medical Society.

1. *The Recommendations Regarding Pre-employment and Periodic Health Examinations for School Personnel,* recently revised, was returned to the subcommittee for further study. Your delegates feel that the recommendations as outlined would not best serve either the personnel or the students. I personally would prefer to see more frequent eye, hearing, and tuberculin testing done more often than every three years, as recommended for school personnel, and, emotional or mental problems dealt with as they arise.

2. Periodic examinations and tuberculosis control was discussed and a note was made of the fact that the Public Health and Safety Committee of the 1961 General Assembly will hold its Public Hearing on Substitute HB 3399 on March 22, 1961, which concerns the tuberculosis test for school personnel, as recommended by the Connecticut Advisory School Health Council.

3. The film "Generation to Generation" was previewed and unanimously approved as an excellent aid in sex education for students of junior high school level, along with proper instruction. Two copies of this film are available from the State Department of Education.

4. The brochure entitled "A Guide to Supplementary Health Education Resources" was presented to the Council and has been distributed to various schools. This lists, and describes the educational material available by State level official and voluntary agencies.

5. A report on the Naroctics Problem and Alcoholism was discussed at length, primarily as to who should teach the subject matter and how it should be approached. The Bulletin (No. 53) "Narcotics Education" published by the Connecticut State Department of Education, and the pamphlet "Narcotic Addiction" were presented as a suggested approach for this problem. For alcohol education there is available a bibliography entitled *Alcohol Education for the Laymen* by Monroe and Stewart, published by Rutgers University Press in 1960. Also pamphlets No. 3 and No. 4 on alcohol problems, by the Yale Center of Alcohol Studies, and "Facts About Alcohol" by Raymond McCarthy, published by Science Research Associates, Inc. were recommended as teaching aids.

These above mentioned reports led to a discussion of just how much health education was actually being done in the schools, and how to encourage and improve its presentation. Your delegates felt that the subjects of health education should be done by teachers and persons who are willing to teach this material. I would like to see health education incorporated into a very definite classroom subject in which, personal hygiene, dental care, nutrition, physical fitness, alcoholism, narcotics education, smoking, and mental hygiene, could be taught so as to help and motivate children to desire developmental and emotional health, a sort of "Art of Living" course. We hope to have this concept discussed further at future meetings.

I have enjoyed serving in the Council during the past year, as well as has Dr. McCarthy. I would welcome more of a directive from the Medical Society as to the nature of my function as representative of the State Medical Society.

Respectfully submitted,
Joseph J. Bellizzi

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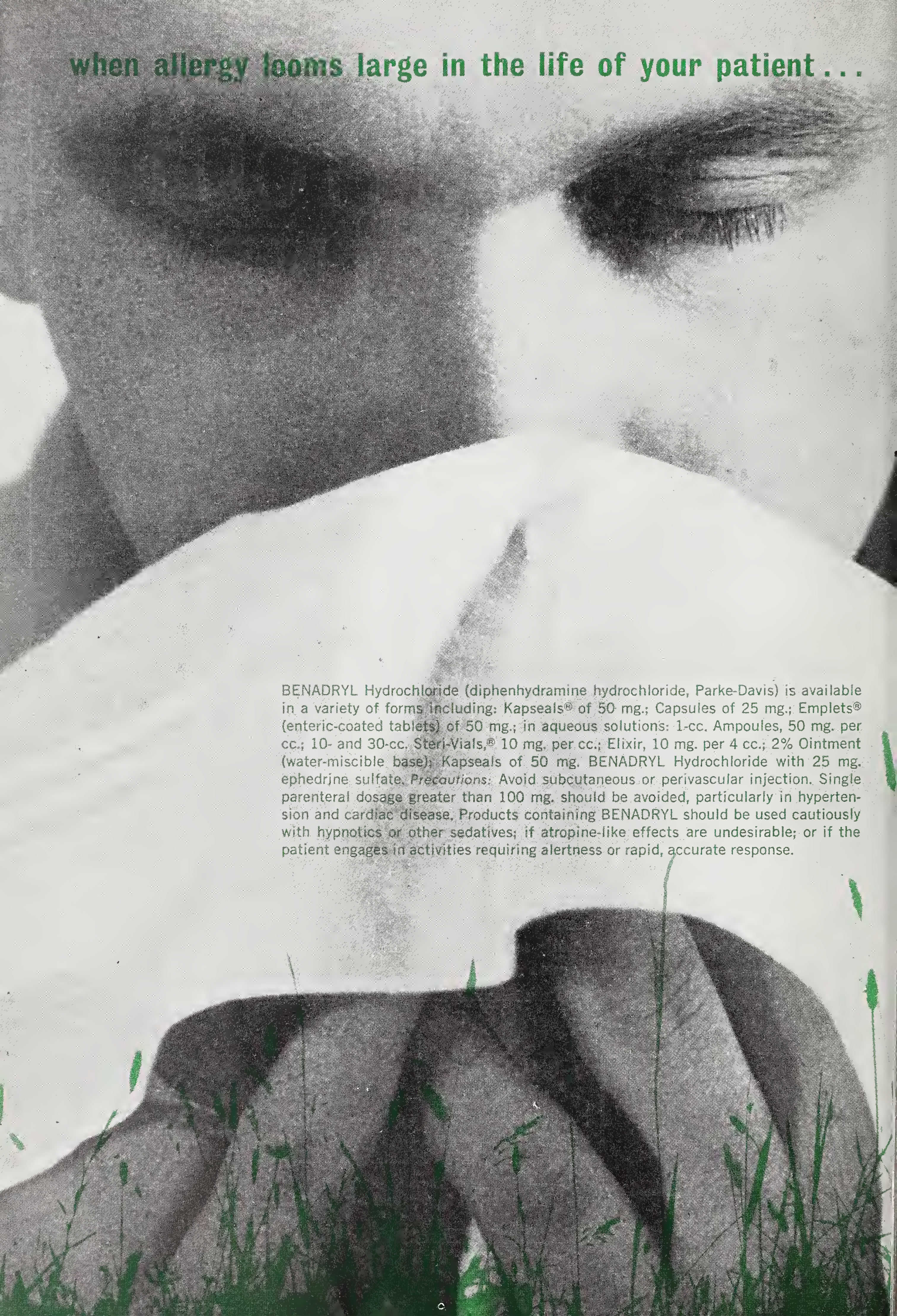

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Quo Vadis

Know whence you came, where you are, and where you are going
—Martin Buber

With this issue, the *Journal* enters upon its twenty-sixth year. It is easy enough to know whence we came. In the twenty-five bound volumes can be found reflected all medical progress, continuing aid to county associations in every way possible and an efficient and creditable fulfillment of its function as the official organ of the Connecticut State Medical Society.

It has been said that through the power of heredity we have to atone for the sins of our ancestors. But it is also true that through the power of heredity we may enjoy the best which nature can give us. Our heredity has given us a strong body with which to cope with the ever increasing problems of a scientific publication. The secure foundation and excellent editorial policy of Dr. Stanley Weld, the founder and first Editor of the *Journal,* has bequeathed to us a publication of such merit as to rank among the best five of American state journals. No recent poll has been taken as to how our *Journal* ranks now, but we would feel happy if our efforts were even to equal that of the founder.

Where do we stand now? The major task of medicine now as always is to maintain and promote health, to prevent disease and to heal when prevention has broken down. Even then we have not fulfiilled our task until the sick man has been rehabilitated and returned to his place of usefulness in society. Our *Journal* will strive to bring to its readers everything that can illuminate where we stand now, the best thinking in every field of medical progress, the newest ideas and newest trends.

We are told that "All experience is an arch wherethro gleams that untravelled world." It is therefore fitting that we should at least gain a glimpse of "where we are going." The ultimate value of our efforts certainly must depend upon a large number of factors which we may ascribe to our philosophy. Sigerist tells the story of a friend in Germany who was asked whether he was a Nazi or a Socialist. His answer was "I am a physicist." He remained a physicist but it was not long before he was told what he had to think. We are almost at such a stage now. We no longer can afford to be politically indifferent. In the future, politics will be everything in life and in the medical field as well. Whether medicine succeeds or fails, whether the arts and sciences will flourish or starve will ultimately be due to politics. We have the knowledge to cure a great many diseases, to save from premature death countless people but whether we can apply our knowledge fully depends more on statesmen than it does upon us. The actual task is political.

The medical historian endeavors to make unconscious trends conscious so that we can face and discuss them openly. Medicine as it is practiced today is a service that is being sold by the physician and purchased by the patient. It has definite economic aspects. It has to fit into an economic scheme. How can we discuss any of these features without knowing the elements of economics? Without economics we cannot understand history either general or medical. The physician is given the best that medical education can give today. But it must be admitted that although we are supposed to be responsible citizens of a democratic country, having the privilege to vote and to influence the destinies of our country, most of us are indifferent and politically naive and devote almost no study to the problems at stake. The *Journal* will dedicate itself in the future to help rectify this deficiency in our education as far as possible.

In the final analysis, this deficiency can only be corrected when the physician begins to see the place he occupies as a physician in a modern society. He is more than a dispenser of services to the sick. He is a scientist, educator, and social worker. He is in close touch with the people he disinterestedly serves. He directs all his efforts towards the promotion of health and prevention of disease. When these efforts have broken down, he becomes a therapist, protecting people and guiding them to a healthier and happier life. This philosophy needs emphasis among physicians and laity alike. Perhaps if the physician understands his place in society and society understands the physician's role, many misunderstandings will fade away and both we and society will work together for the common good. It will be the task of our *Journal* to expand and expound this philosophy of medicine. If this is our philosophy, "that untravelled world" of the future can be approached with hope and with confidence.

LOUIS H. NAHUM, M.D.
Literary Editor

ADVANCES IN OPHTHALMOLOGY IN THE LAST 25 YEARS

ROCKO M. FASANELLA, M.D.
New Haven

The Author. *Associate Clinical Professor, Section of Ophthalmology, Yale University School of Medicine, New Haven.*

In the last quarter of a century ophthalmology has moved forward. The most striking advancement in recent years in this specialty has been chemical zonulolysis for loosening the lens zonules and thus facilitating cataract extraction. Equally advanced and helpful has been the use of the light coagulator for treatment of certain forms of tumors and flat detachments. Especially in glaucoma and uveitis, much remains to be done.

It is fitting that on the occasion of the Twenty-Fifth Anniversary of *Connecticut Medicine,* a review of the progress in a specialty should be considered. There have been many advances in ophthalmology over the period of the last twenty-five years.

Strabismus

Twenty-five years ago the child with crossed-eyes was doomed to follow one of two courses. Because of his "cocked-eyes", "cast", or "wall-eyes" he became either the extreme introvert hidding from others or the extreme extrovert and the neighborhood bully. Younger children soon learned not to make remarks about his crossed-eyes or they too might end up with an eye affliction—a black eye! The old folks cry, "leave him alone, he'll outgrow it" may have been partly true but chiefly a necessity in those days. Largely responsible for this feeling was the danger of general anesthesia for a child in need of a relatively elective procedure. In addition, many times eyes that had previously turned in began to turn out with the passage of time. However, by this time, often a permanent irreversible laziness of an otherwise healthy eye would set in. For all intents and purposes, a useless eye resulted.

Today, patching and surgery at an early age result in marked cosmetic improvement and often a complete cure. The ideal age for beginning treatment of children with strabismus is six months and the completion should be by six years. Previously, surgery was done at a later age when only cosmetic improvement could be hoped for. Today most ophthalmologists feel that the first stage of surgery should start at the age of three and be completed by the age of six. For the small group of children who are born with marked crossing surgery even at one year is the new trend.

Today, by a very specialized set of diagnostic steps and treatment, a new science called pleoptics can salvage a few of the neglected cases of "lazy" eyes. However, because of the need of cooperation on the part of the patient, pleoptic treatment is rarely begun until after the age of six. In some countries, such as Switzerland where this specialized visual training began, children are enrolled in special schools often away from home for the coordination of eye movements with hand and other movements. Even the adult can occasionally profit from pleoptics but often cannot afford to take the time for such intensive training.

Great forward strides are being made in understanding the basic mechanisms of strabismus. Electrical studies of the mechanism of the eye called electromyography has played a part in understanding some of the problems in strabismus. Among the limitations in the routine use of these electrical studies are the cost of the apparatus, the need for general anesthesia in children, and the discomfort factor in adults.

Retrolental Fibroplasia

It seems strange that "progress" in the last quarter of a century has included the creation of the atom bomb, the chief function of which is to destroy. Likewise, it is ironical that a progressive country like America has had the greatest number of children who suffer blindness of the premature when the best in modern equipment and scientific drugs are available. On the other hand, the premature child in Africa, China or even Europe could not afford to live in incubators or pay the high cost of oxygen. Consequently, these children rarely lived; yet, neither did they show the eye disease of "too much oxygen"—retrolental fibroplasia.

Retinoblastoma

The malignant, and too often fatal tumor of childhood is retinoblastoma. Although this dreaded killer still takes its heavy toll, great advances have been made in controlling it, especially in the remaining eye. A combination of new chemicals and instruments have made this progress possible. Today radium and x-ray are aimed skillfully at only the involved portion of the eye. Likewise, the use of the light coagulator partly destroys these tumors. The light coagulator makes use of the rays of the sun scientifically generated by xenon tube. These rays are focused by a magnifying glass very similar to the one used by children to focus the rays of the sun and burn holes in paper. Neither drugs, x-ray or the coagulator do a perfect job in every case. However, the combination often preserves enough vision to light up the world of children forced to choose between death or a life without sight.

Iritis and Uveitis

Iritis and uveitis are diseases affecting both children and adults. The uveal tract consists of the iris, or colored portion of the eye, the ciliary body and more posteriorally, the choroid. The main function of this vascular tract is nutritional. Diseases often involve more than one portion of the uveal tract and even other parts of the eye, especially the retina. Therefore, we speak of a chorioretinitis.

A quarter of a century ago it was stylish to eradicate every focus of infection as a possible source of a chorioretinitis or iritis. When a patient was relieved of his tonsils, appendix, prostate and still found no relief for his eyes, either his patience or his pocketbook ran out! With the passage of years the suspected agent changed from tuberculosis to Boeck's sarcoid. Now toxoplasmosis and histoplasmosis are frequently seen as possible causative agents. Here again, cure of these diseases did not always stop the progress of the local eye disease. Ophthalmologists in the past were sometimes ridiculed by their more learned colleagues for their belief that controlled induced fever therapy often cleared a uveitis or iritis. Years later these scoffing non-believers discovered the "how and why" with the coming of the greater knowledge of the action of steroids. Today, unless some specific cause can be found, many ophthalmologists feel that fever therapy plays an important part in controlling iritis and uveitis. Steroids as a substitute for fever therapy are among the most valuable tools in the treatment of iritis and uveitis. Extreme caution must be used, however, in utilizing the steroids in the presence of tuberculosis of the eye. Steroids are contraindicated in active cases of herpes simplex. When a diagnosis of tuberculosis of the eye is made anti-tuberculosis drugs sometimes combined with a steroid are indicated. Tuberculin desensitization is still used by some in cases suspected to be caused by tuberculosis. Much work remains to be done in understanding and treating uveitis adequately.

Cataracts

In young children, little to no progress has been made in the last quarter of a century in either understanding or adequately treating cataracts. Perhaps an exception to this generalization is the connection noted between childhood diseases in the pregnant mother in the first trimester and cataracts in the newborn.

Unlike strabismus where early surgery has been the trend, late surgery has been the decision of choice in children with cataracts. Only exceptionally where no vision is present because of complete cataracts is early surgery attempted. This is usually at one year of age. Previously early surgery was the procedure of choice. Multiple needlings or discissions were performed to ripen the cataract and cause its early absorption without opening the eye. However, it was noted that surgery of this type, especially if done early, would increase the already multiple problems present in a child with congenital cataracts. Among these problems were retinal detachment and secondary glaucoma.

The story of removal of cataracts in the adult compares with the story of man in space. Twenty-five years ago cataracts were routinely removed leaving the shell, or capsule, behind. Prolonged periods of hospitalization and bedrest were the rule. Today the cataractous lens is usually removed in its entirety. There is no need for a secondary operation to remove remnants of the capsule or of the cataract proper. Fine needles and sutures permit the patient to be safely out of bed even on the day of surgery and out of the hospital usually in one week or less.

In the past, the zonules or suspensory ligaments holding the lens in position, had to be broken manually. A much greater push and pull was needed to break resistant zonules resulting often in a greater loss of vitreous or post-operative reactions.

The use of a new drug called alpha-chymotrypsin to dissolve or weaken these zonules and thus facilitate removal of the cataract, is revolutionary. This is spoken of as chemical zonulolysis. Today the use of drugs such as alpha-chymotrypsin, especially in the twenty to fifty age group is almost routine. No damage to other structures of the eye have been noted and complications are absent when the drugs are used properly. As a rule, in patients beyond fifty years of age, the zonules are soft enough not to necessitate the use of drugs for zonulolysis. Unfortunately, anatomical differences in the eye, the need for general anesthesia in children and other factors make it wise not to use these drugs in those under twenty years of age.

The use of glass and plastic implants as substitute lenses for the cataractous lens is a dramatic innovation but the associated problems do not justify their use. Perhaps the only real indication for the use of these substitutes at this time is the young person with the cataract involving only one eye who cannot tolerate a contact lens. Among the staunchest advocates of contact lenses are those patients who following cataract surgery involving only one eye complain that the unoperated eye and the operated eye will not work together as a team. Even those with bilateral cataracts often complain bitterly about adjusting to the strange, new world with ordinary cataract lenses. Among their complaints are the weight of the cataract glasses, the magnification and distortion of images, and especially the confusion of trying to make the two eyes work together. Most of these problems are overcome by the person who can tolerate a contact lens after the removal of the cataract. The sensitivity of the eye and the irritation of wearing a contact lens is appreciably less in an eye that has had cataract surgery.

At the present time there are still no drugs to inhibit or dissolve cataracts.

Glaucoma

With the exception of the use of carbonic anhydrase inhibitors such as Diamox or osmotic regulating drugs such as intravenous urea, there has been no real progress made in the treatment of glaucoma. These drugs are indicated in certain stages of glaucoma and special types of glaucoma. The carbonic anhydrase inhibitors suppress systemically the formation of aqueous. Locally there are certain drugs which help decrease aqueous formation. More careful studies have helped to group the primary forms of glaucoma. One is called a narrow-angle or closed-angle type of glaucoma and the second is called a wide or open-angle type of glaucoma. In the so called narrow or closed-angle type of glaucoma, especially if it is caught early, ideally a "little" operation such as a peripheral iridectomy can do a big or often a complete job. A quarter of a century has taught us that the other type, the wide or open-angle glaucoma is best treated as a medical problem as long as possible. Surgery for this type of glaucoma is used only in the later stages of the disease.

Tumors in Adults

The counterpart of the retinoblastoma tumor seen frequently in children, is malignant melanoma. Malignant melanoma is the most common tumor of adults. Here too, time has taught us a valuable lesson. Because of the multiple foci, complete removal of a tumor in the involved eye has not always resulted in a cure. Many patients who supposedly had the tumor completely removed, with no evidence at the time of involvement in other portions of the body, have lived no longer, in some cases, than those patients in whom the tumor was carefully watched. The differential diagnosis of malignant melanoma often presents problems. The use of P32 studies have been especially useful when the tumor has been found in the anterior segment of the eye. In many cases, P32 studies have definitely established the diagnosis of the exact nature of the tumor. The light coagulator has been more helpful in the treatment of malignant melanoma than it has been in the treatment of the non-pigmented retinoblastoma of children. Pigmented tumors are best treated with the light coagulator because the absorption of the rays is so much better where pigment is present. Again, the light coagulator must not be considered the cure-all in this type of tumor.

Metastatic tumors involving the eye are best treated by x-ray.

Detached Retina or Retinal Separation

Due to longevity, retinal separation or detached retina has become more and more common. However, protective glasses and safety measures have decreased the number of traumatic detachments which previously bore the best prognosis. The greatest number of retinal separations are attributable to degeneration associated with an increase of age. Previously, a French ophthalmologist knowing the overall poor prognosis in retinal detachment surgery, refused to operate those cases which did not have a history of trauma and or when the history of trauma was over two weeks. His percentage of successes was understandably high. However, today, practically all cases of retinal detachment are operated and the percentage of cures is steadily increasing. Since for age there is no cure, and since the greater number of detachments seen today are the result of degeneration associated with age, the retina in these cases can be sealed and then become detached again in the same part of the eye or in another portion of the eye. Years ago there were three principles in the operative cure of retinal detachments: one was the exact localization of the hole in the retina; secondly was the welding of the retina in the area of the hole and third was the removal of the fluid separating the detached retina from the choroid sclera. Today the first of these two principles are still fundamental. Newer schools feel that in many cases, especially recent ones, the drainage of fluids is not only unnecessary but dangerous.

The striking changes in the treatment of detached retinas in the last twenty-five years have been threefold: (1) The shortening of the volume of the globe so that the sclera and choroid would approximate the detached retina; (2) Pushing the retina to the choroid; (3) The use of the light coagulator for treating certain types of detachment and certain forms of recurrences. The "eye-ball shortening" operations have been varied and multiple, consisting of excision of portions of the sclera, infoldings of the sclera, suture and facia lata belts and new plastic materials. The newest substance for pushing the retina to the fixed wall of the choroid sclera has been human vitreous from donor eyes. Most dramatic and variable in flat or recurrent forms of detachment has been the light coagulator. The light coagulator has been used for "spot-welding" the retina back in place without actually opening the eye. The presence of more than a small amount of fluid between the retina and choroid spells failure. Those cases with subretinal fluid responding to bilateral occlusion and bedrest are ideal for this "spot-welding" of the light coagulator. Cases of holes without detachment are likewise treated prophylactically. Many combinations of these three recent advances have increased the percentage of cures appreciably. The postoperative use of sandbags is a thing of the past. Although early ambulation and the use of no pinhole glasses is today's popular trend, it is felt that more complete cures are obtained by the use of some of these older restrictions. Many surgeons list as cures those cases with a full field. However, to the patient, a real cure is obtaining that vision which he had previous to the detachment. It is felt that where the macular is involved, many more cases reach their goal if a few of the old fashioned restrictions are still maintained.

If more exact criteria of the cure includes visual acuity, 50% to 75% is a more realistic figure for today's overall picture of detachment surgery for unselected cases. The dream of a pioneer in this field is that the goal of 99% cures may someday be reached.

Corneal Transplants

Great progress has been made in the field of corneal transplantation. However, if one considers acuity and the ability to use the eye post-operatively, the overall and final results must be considered over enthusiastic. Exceptions to this are cases such as conical cornea and keratoconus treated in the early stages. Here penetrating grafts are most useful.

New ways of preserving corneas, new instruments and the world wide distribution of corneas have increased the number of eyes saved from blindness. Among the new instruments is a modification of the electric razor to cut uniform layers of cornea for lamellar transplants. Lamellar grafts are those grafts where only the outer layer of the cornea is used. With few exceptions, this type of graft does not result in visual improvement. These transplants utilizing this instrument are taken from the donor eye. The instrument is not used for the recipient eye. Very dramatic is the use of plastic materials for the rare, hopeless case of the completely scarred and vascularized cornea. Although the number of such successful cases is indeed minimal, it opens new vistas in eye surgery.

Complete kidneys have been transplanted. Although complete eyes have been transferred in the embryonic stage of lower forms of animal life, this goal in humans today seems impossible. However, as the optomist says, "the impossible just takes a little longer".

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SPONTANEOUS PNEUMOTHORAX:
WITH SPECIAL EMPHASIS ON TREATMENT

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1. **Two consecutive series totalling 127 cases of spontaneous pneumothorax have been reviewed.**
2. **Treatment of a particular episode of pneumothorax seems best accomplished by intrapleural suction drainage in order to attain early expansion and pleural symphysis. This also appears to be the most certain prophylaxis against future attacks.**
3. **Excision of blebs and parietal pleurectomy are presented as the procedures of choice when operative intervention is required.**
4. **The technic of management as used in this clinic is described.**

SPONTANEOUS pneumothorax has been recognized as a clinical entity since 1803 when Itard[1] described it and gave it the modern name. Laennec,[2] armed with his technic of mediate auscultation, presented a more comprehensive description of spontaneous pneumothorax in 1819 and suggested its possible relationship to emphysematous bullae. As long as tuberculosis was high on the list of lethal diseases in the Western world, it was a common cause of spontaneous pneumothorax, and the attendant tuberculous pleuritis an important factor in mortality. In 1880 a Viennese physician, Biach[3] reported 918 instances of spontaneous pneumothorax of which 715 were ascribed to tuberculosis. However, as early as 1856 McDowell[4] of Dublin encountered a sudden pneumothorax in a young man who was not suffering from tuberculosis. Chauffard[5] in 1896 and Osler[6] in 1898 reported instances in which the tuberculin test was negative; by 1902 Fussell and Riesman[7] were able to collect 56 non-tuberculous instances from the literature, adding two of their own. A comprehensive thesis by Kjaergaard[8] in 1932 firmly established the fact that a majority of spontaneous pneumothoraces were not associated with tuberculosis in an active form. In a previous study from this clinic[9] the incidence of positive tuberculins was 71 per cent in those patients tested. It is quite possible that tuberculosis in the process of healing may leave residual scars which play a role in the pathogenesis of the subpleural blebs and more deeply situated bullae which are the basis of spontaneous pneumothorax.

In a patient who complains of sudden chest pain with shortness of breath, the recognition of pneumothorax is not difficult if the physician will search for the characteristic physical findings—hyperresonance, diminished to absent breath sounds, diminution of tactile and vocal fremitus, and lag in the ventilatory activity of the involved side.

The clinical picture of tension pneumothorax deserves particular mention, since much valuable time may be wasted if this serious complication goes unrecognized. Cyanosis, severe chest pain, dyspnea, hypotension and tachycardia are often

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present in the patient with tension pneumothorax, and may lead to the erroneous diagnostic impression of coronary occlusion, dissecting aneurysm or pulmonary embolism. This is one of the instances in medicine in which life may be saved or very distressing symptoms alleviated by the prompt initiation of thoracentesis.

Treatment

Spontaneous pneumothorax requires that the patient be hospitalized immediately for diagnostic measures and, more especially, for treatment. Accumulating experience has shown that the patient treated aggressively by the early insertion of an intercostal polythene tube or small catheter into the affected pleural space for purposes of constant suction will have his convalescence shortened[9,10,11] and the possibility of a future recurrence on the same side sharply reduced.

The closed thoracotomy is always accomplished under local procaine anesthesia, and preferably with small caliber polyethylene tubing (P. E. 190) inserted through a No. 14 guage needle which serves the purpose of a cannula. The tube is then fixed in place on the skin and adapted to the suction apparatus using a 18 guage needle, which fits snugly into the polyethylene tube. Intrapleural suction is important for two reasons; first, sealing of the pulmonary leak against the parietal pleura is the most effective method of promoting and maintaining expansion of the lung. Second, the promotion of early pleural approximation is, for some reason, the best prophylaxis against a recurrence of spontaneous pneumothorax. The pleuropulmonary rupture that seals by a coagulum and scarring without pleural symphysis remains a weakened point and may well be susceptible to rupture in the future. This chain of events is minimized if the primary episode is treated promptly by intrapleural suction, and sealing of the leaking point against the parietal pleura occurs. It has been established that pneumothoraces treated expectantly have a higher incidence of recurrence (about 25 per cent) than those treated by intrapleural suction. An impression has been gained that when suction is instituted late in the course of the disease, the recurrence rate is higher than when pneumothorax is treated more promptly.

Occasionally, because of the magnitude of the pulmonary leak or because of fibrin deposition around the catheter, the smaller polyethylene catheter has proved insufficient. Under such circumstances, it may be replaced by a larger intercostal rubber tube (16-30 Fr.) inserted through a trochar under local anesthesia at the bedside. A large tube should be used by preference in instances of spontaneous hemopneumothorax. We have found siliconized rubber tubing quite useful in reducing the clotting of blood and serum in the tube.[12] Installation of aqueous penicillin, 100,000 U. in 5 to 10 cc. of normal saline, once or twice daily, has been found helpful in stimulating pleural reaction and symphysis. Bacitracin may be used for the same purpose. Intrapleural antibiotics serve the further purpose of combatting infection in the pleural space that might occur secondary to the presence of the tube, or as a result of a bronchopleural fistula. Systemic antibiotics are not necessary as a rule. The use of a blow bottle, breathing exercises, endotracheal aspiration and even bronchoscopy[13,14] are useful in preventing and treating atelectasis that might otherwise delay reexpansion. Thoracoscopy[15] has been used in a rare instance to assess the extent of the gross pathology present, but installation of chemically irritating substances, such as talc, hypertonic glucose or silver nitrate, through a tube has not been a part of the treatment plan.

There are three major indications for open thoracotomy in spontaneous pneumothorax, more than one of which may be operative in any given case. These major indications are, first, continued bleeding in spontaneous hemopneumothorax. We do not resort to thoracotomy in this group of patients as early as some recommend.[16,17] In addition to general supportive measures and transfusions of fresh whole blood (in order that platelets and other constituents important for clotting will be available), various adjuvants such as vitamin K, vitamin C, intravenous Premarin and Adrenosem may be tried on an empirical basis. Careful evaluation of the clotting mechanism prior to institution of these agents is important. Since the bleeding in spontaneous pneumothorax is from a torn pleural adhesion or the point of rupture, the bleeding vessel may be under systemic arterial pressure, and non-operative means of hemostasis are not always successful.[17] The presence of blood in the pleural cavity is likely to promote pleural symphysis and should result in a lower recurrence rate.

Decortication is necessary in some cases of organizing hemothorax. Early and proper placement of chest tubes, supplemental thoracenteses, intrapleural streptokinase-streptodornase and physical therapy when used properly will minimize the necessity of surgical decortication.

The second indication is recurrence of pneumothorax. Thoracotomy is generally advised in treating a third episode (second recurrence) of spontaneous pneumothorax. Again, this is not a rigid rule and may vary in either direction. Factors influential in this decision include the patient's age, general physical condition, method of treatment in previous episodes, the demonstration of blebs or bullae by X-ray, history of contralateral pneumothorax, the patient's proximity to good medical care and his occupation.

The third indication for thoracotomy is pneumothorax refractory to management by simple intrapleural suction. When cessation of leak and re-expansion of the lung cannot be attained by closed management, open thoractomy is necessary.

Technic of Pleurectomy

Since Gaensler (1956)[18] popularized parietal pleurectomy in the management of spontaneous pneumothorax and pointed out its ease of accomplishment, effectiveness and relative safety, we have used this procedure in conjunction with excision of blebs or bullae for most patients with spontaneous pneumothorax who require thoracotomy. The operative procedure is performed through the bed of the resected fifth rib or through the fifth or sixth intercostal space. If the thoracotomy is indicated because of a persistent air leak, the intercostal catheter should be left in place attached to an underwater seal during induction of anesthesia and until the pleural cavity is entered. This is to prevent tension pneumothorax, which may develop rapidly during this period of manipulation.

Once the pleural cavity is entered, search is begun for the site of the leak. This not always easy to identify, even by immersion of the lung in saline solution, especially in the presence of multiple blebs or bullae. An important aid in localization is a fibrinous, yellow or grey coagulum around the leaking point. The leaking area should be excised or oversewn. Other visible localized blebs or bullae should also be excised, since they represent a threat of future enlargement or rupture. The excision should be the most restricted possible under the circumstances so as to conserve pulmonary function. Wedge resection is usually sufficient. Occasionally, segmental resection will be necessary, and in rare instances the extent of pathology will dictate lobectomy.

Pleurectomy is then carried out by elevating the pleural edges in the thoracotomy incision and carefully removing the parietal pleura in a sheet by sharp and blunt dissection. The pleural excision may be carried around the apex and down the mediastinum to the level of the aortic arch; most of the mediastinal, and all of the diaphragmatic, pleura is left intact, while the pleura lining the rib cage is removed insofar as possible. This type of pleurectomy is important in instances where the leaking area cannot be identified with certainty and when there are widespread bullous changes or blebs in multiple areas. If the site of parenchymal leak can be identified with certainty and the remainder of the lung is absolutely normal to inspection and palpation, a limited pleurectomy may be performed, or the parietal pleura may be simply abraded with dry gauze.

The major hazard of pleurectomy is bleeding, which, when of major proportion, is usually from an intercostal vessel. Care must be taken to keep the plane of cleavage inside the endothoracic fascia to avoid injury to the vessels. It is important to identify and avoid the azygos vein, the aorta, the great vessels and the nerves at the thoracic inlet. Meticulous hemostasis must be secured prior to closing the chest.

Pathology

Gross and microscopic examination of resected lesions has shown subpleural blebs and solitary or multiple emphysematous bullae, often with considerable hypertrophy of the smooth muscle elements in the bronchi and blood vessels. A considerable number reveal a significant infiltration of eosinophiles; whether this is simply an irritative or allergic phenomenon or a localized manifestion of eosinophilic granuloma[19,20] is not clear. In one case, a Negro female of 23 years, with bilateral pulmonary infiltration demonstrated radiologically, the diagnosis of eosinophilic granuloma had been established by thoracotomy and lung biopsy sometime before the onset of the pneumothorax.

Case Material

Lindskog and Halasz[9] reported 72 patients with pneumothorax treated in this hospital from 1945 to 1955. Subsequently, from 1956 through 1960, an additional 55 patients have been treated for 73 episodes of spontaneous pneumothorax. These two groups afford some interesting comparisons, and an analysis of the entire 127 cases provides a basis for several conclusions.

TABLE I

		SEX		
	AVERAGE AGE	M	F	TOTAL
1945-55	34 yrs.	62	10	72
1956-60	33 yrs.	42	13	55
Total	33.5 yrs.	104	23	127

Age and Sex—Table I shows the age and sex distribution of the patients. The average age is in the early 30's, somewhat older than in most reported series. There seem to be two age groups involved, a younger group in the 'teens and early 20's with pneumothorax secondary to rather localized blebs or bullous cyst formation, and an older group, in the 50's and 60's, with pneumothorax secondary to more diffuse emphysematous changes.

Symptoms—Chest pain, dyspnea or a combination of the two are the cardinal symptoms of pneumothorax (See Table II). The pain is generally pleuritic in nature, although it may on occasion be crushing or merely a sensation of tightness. Cyanosis, cough, and adventitious noises in the chest are less frequently noted.

TABLE II
SYMPTOMS

	PAIN	DYSPNEA	BOTH	OTHER
1945-55	50	9	6	7
1956-60	20	7	22	6
	—	—	—	—
Total	70	16	28	13

Past History—Previous episodes of pneumothorax or multiple episodes while under observation are the most noteworthy facets of the pulmonary history in these patients (Table III). Occasionally there is a history of emphysema, and only rarely a history of other significant pulmonary disease. The smoking habits of these patients are listed in Table IV. The significance of heavy smoking in relation to occurrence and recurrence of pneumothorax is unknown.

TABLE III

	MULTIPLE EPISODES	
1945-55	23	32%
1956-60	25	45%
	—	—
Total	48	38%

TABLE IV
SMOKING

	>1 PK/ DAY	<1 PK/ DAY	NON-SMOKER	UNKNOWN
1945-55	32	8	8	24
1956-60	28	11	9	7
	—	—	—	—
Total	60	19	17	31

Laboratory, Radiographic and Other Findings—The P.P.D. was positive in a smaller percentage of the 1956-60 group, probably reflecting the generally decreasing frequency of positive tuberculin skin tests in young adults today (Table V).

TABLE V
P.P.D.

	POS.	NEG.	NOT DONE
1945-55	27	11	34
1956-60	16	23	16
	—	—	—
Total	43	34	50

TABLE VI
LATERALITY

	RIGHT	LEFT	BILATERAL
1945-55	41	29	2
1956-60	21	28	6
	—	—	—
Total	62	57	8

Laterality of pneumothorax is noted in Table VI. Bilateral cases include those which occurred seriatim as well as cases of simultaneous bilateral involvement.

Treatment—Tables VII and VIII show the admissions by service and the treatment in this group of patients. Several trends are evident. More patients are being admitted to the thoracic surgical service than in years past. This is due to the growing realization among internists that spontaneous pneumothorax is best treated by intrapleural suction, and that facilities for the institution and supervision of intrapleural suction are readily available on a thoracic surgical service. However, a significant number of patients have been treated with suction while on the medical service, usually in consultation with a thoracic surgeon. The average hospitalization for patients treated by intrapleural suction drainage in the 1956-60 group was 6 days, with a range of 3 to 27 days.

TABLE VII
SERVICE

	THORACIC SURGERY	MEDICINE
1945-55	36	36
1956-60	35	20
	—	—
Total	71	56

TABLE VIII
TREATMENT

	OBSERVATION	THORACENTESIS	INTRA-PLEURAL TUBE	THORACOTOMY
1945-55	26	8	22	16
1956-60	7	0	31	17
	—	—	—	—
Total	33	8	53	33

There has been no clinically recognized pleural infection in the group as a whole and no complications in those patients treated by tube drainage only. Multiple thoracentesis has not been used as a treatment of choice in spontaneous pneumothorax during recent years, but has been employed to treat pneumothorax secondary to tracheostomy. It is particularly useful in children under these circumstances, since the pneumothorax is not due to pulmonary parenchymal pathology, and therefore less prone to recur.

The somewhat higher percentage of patients subjected to thoracotomy in the 1956-60 group may seem to reflect a more aggressive approach to spontaneous pneumothorax, but this remains a disease usually treated satisfactorily without thoracotomy.

Table IX shows the extent of resection employed in the patients undergoing thoracotomy. The most conservative resection applicable should be performed. Pleural abradement using dry gauze was employed to promote pleural symphysis in many cases of the earlier group. All of the parietal pleurectomies were performed since 1956, and all patients undergoing thorocotomy in this group have had pleurectomy in some measure.

TABLE IX
EXTENT OF RESECTION IN THORACOTOMY GROUP

	WEDGE	SEGMENT	LOBE	NO RESECTION
1945-55	10	3	1	2
1956-60	17	0	0	0
	—	–	–	–
Total	27	3	1	2

Postoperative complications occurred in four patients of the pleurectomy group. Each of two patients required one thoracentesis for aspiration of pleural fluid in the late postoperative period. One patient required reinsertion of an intercostal tube to obliterate a residual apical air pocket. Another required re-operation on the day following pleurectomy to control intrapleural bleeding. One additional patient required transfusion in the postoperative period. The average length of hospitalization after thoracotomy in the 1956-60 group was 11 days with a range of 9 to 26 days.

Excessive operative blood loss has been pointed out as a criticism of parietal pleurectomy. An average blood loss of 1300 to 2000 cc. has been mentioned by various writers.[22,23] Of the 17 patients undergoing pleurectomy in our second series, two received no blood during operation, four received 500 cc., six received 1,000 cc. and five received 1500 cc. Less blood would probably have sufficed in most instances; certainly in the four who received only 500 cc. each. Average operative blood replacement in the series was 900 cc. and only two patients received blood in the postoperative period. There has been as yet no recurrence of pneumothorax in this series following pleurectomy, and no report of recurrences following pleurectomy done by others. It must be remembered, however, that only five years have elapsed since pleurectomy has been employed in the surgical management of spontaneous pneumothorax.

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SYMPTOMS AND SIGNS IN 100 CASES OF VERIFIED BRAIN TUMOR

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The symptoms and physical findings in 100 consecutive cases of verified brain tumor are presented, and the clinical picture is found to be very variable. No symptom or group of symptoms is invariably present. Alertness and a high index of suspicion on the part of the clinician is required to make possible an early diagnosis of "brain tumor suspect." Ventriculography, pneumoencephalography, or arteriography will usually be required to establish a definite diagnosis of brain tumor and to localize the lesion. The prognosis in cases of benign brain tumor is excellent.

This presentation is a review of the diagnostic features in 100 consecutive cases of verified brain tumor. It is hoped that it may prove helpful to the clinician who has not had the occasion to diagnose a brain tumor for several years—but who may encounter such a patient in his office tomorrow.

"It must be stated at the outset that no constellation of symptoms is pathognomic of an intracranial tumor. Headache, vomiting, and choked disc, the triad of symptoms commonly considered characteristic of brain tumors, may appear early in the course of some cases, in others not until the terminal stages, while in some it may never develop at all."[1]

Brain tumors may produce symptoms of increased intracranial pressure (headaches, vomiting, choked disc, impairment of mentation, impairment of consciousness), symptoms of damage to adjacent brain tissue (motor loss, sensory loss, ataxia, visual field defect, cranial nerve defect) and symptoms of focal irritation (convulsions—focal, Jacksonian or generalized).[2,3] Pituitary tumors, usually produce endocrine disorders as well. Moreover, symptoms due to brain tumor are usually progressive. The difficulty in diagnosis arises when the tumor fails to produce these symptoms. Some of the patients in this series presented with no symptoms except headache, and presented no abnormalities upon clinical examination. Yet 40 per cent of these patients had no history of headache at all. Some presented an almost diagnostic history of a gradually progressive hemiparesis; yet no motor loss of any kind was found in 50 per cent. Some presented a definite history of focal or Jacksonian seizures; yet 66 per cent had no history of convulsion of any type.

Consider the case of S. M., a white male of 45 years who presented a rather obvious clinical picture of brain tumor. For several years he had had occasional mild headache. Four years before, a lump had become apparent in the right frontoparietal area and had subsequently gradually increased in size. During the previous year he had had two grand mal convulsions. Recently he had been admitted to the State Hospital with the diagnosis dementia praecox. A diagnosis of brain tumor had previously been apparent but the patient had refused surgery. On examination a somewhat nodular oval mass measuring two inches by three and one-half inches was easily palpable in the right frontoparietal region, extending somewhat across the midline. The mass was hard and did not pulsate. It was not tender. Neurological examination revealed no abnormalities except for slight bilateral nerve type hearing loss and slight weakness of dorsiflexion of the left foot. X-rays were reported to show an extensive area of cystic medullary bone absorption with some expansion of the outer and inner cortical margins of both parietal bones. An electroencephalogram revealed high voltage theta waves and occasional delta waves which were intermittent and diffuse with a right-sided preponderence. A lumbar puncture revealed a spinal fluid pressure of 300 millimeters of water and a normal spinal fluid protein. At operation a large meningioma was found underlying the bony abnormality of the skull. It was completely removed with the overlying involved bone and with the involved segment of saggital sinus.

The diagnosis remained obscure for a long period in the case of A. T., a male of 47 years, who had begun to have intermittent frontal headaches six months prior to consultation. These were often associated with the sensation of impending loss of consciousness. However the patient did actually lose consciousness on only one occasion, three months after the onset of headache. The patient had seen a number of physicians with his complaint of headache, but no abnormalities were found on examination. The clinical picture was somewhat confused by the patient's over indulgence in alcohol. More recently the patient had occasionally been aware of the odor of "green pecans." Neurological examination six months after the onset of symptoms revealed no abnormalities except for the presence of a bilateral early but definite papilledema. An electroencephalogram revealed a slow wave focus in the right frontotemporal area. Following ventriculography a right temporal lobe glioblastoma multiforme was removed.

It is apparent that there can be much variation in the clinical picture presented by the patient with a brain tumor. In this series of 100 cases of brain tumor, the first symptoms to appear was as follows:

Headache	38
Convulsions	23
Motor Loss	20
Ataxia	6
Cranial nerve defect	4
Vision impaired	4
Mentation Impaired	2
Lump on head	2
Consciousness Impaired	1

At the time of neurological consultation, the presenting symptoms and signs in these 100 cases were as follows:

Headaches	60
Motor Loss	50
Papilledema	42
Convulsions	34
Consciousness Impaired	25
Mentation Impaired	25
Vomiting	23
Ataxia	21
Sensory Loss	11
Visual field cut	11
Cranial nerve defect	7
Vision Acuity Impaired	6
Lump on head	3

It is readily apparent that headache, motor loss, papilledema, and convulsions are the predominant findings. Yet of these three, only headache was found in more than half of the cases. It is of interest that papilledema was present in only 42 per cent of these cases. The spinal fluid pressure was elevated in only 52 per cent of the 44 cases submitted to lumbar puncture (which was not performed on patients with clinically evident increased intraranial pressure). The spinal fluid protein was elevated in 72 per cent of these cases. Routine skull x-rays were usually entirely normal but were diagnostic in the few instances of involvement of adjacent skull, calcification within the tumor, or pineal shift. While not diagnostic by itself, electroencephalography has proved a useful adjunct.

It is therefore apparent that all of the various signs and symptoms must be kept in mind, and must be coupled with a "high index of suspicion" to make possible the early diagnosis of "brain tumor suspect". The final diagnosis of brain tumor is very often not made until the tumor is demonstrated by ventriculography, pneumoencephalography, or arteriography. Verification of the diagnosis and localization of the tumor was achieved by ventriculography in 70 of the cases, whereas pneumoencephalography was utilized in 14 cases. In 2 cases the tumor was demonstrated by arteriogram and in one case a myelogram which demonstrated extension of the tumor into the upper cervical spinal canal was utilized.

Making the diagnosis can be gratifying. Twenty-seven of the patients in this series had completely benign brain tumors which were removed with a zero operative mortality. With regard to the operative mortality for the total 100 cases, 5 per cent died within one week of surgery, and a total of 13 per cent within one month of surgery. The 42 patients whose brain tumors were classified as glioblastoma had an average survival time of five months after operation. However one such patient survived five years and another is still living and neurologically intact 8 years after her first craniotomy (six months ago a second operation was required).

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CONGENITAL CHOLEDOCHAL CYST

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1. **A case of congenital cystic dilatation of the common bile duct in a 73 year old male is presented.**
2. **The diagnosis was not suspected prior to operation, but was made at the time of surgery.**
3. **A choledochocystoduodenostomy was elected because it was felt that the patient would not tolerate a more extensive procedure.**
4. **The etiology, terminology, signs, symptoms, diagnosis, treatment and prognosis are discussed.**

Congenital cystic dilatation of the common duct is a rare surgical entity. This report is presented both because this condition is extremely unusual in an elderly male and because it illustrates the possible challenge awaiting the surgeon whenever he opens the abdominal cavity. 403 authentic cases were reported in the world literature up to 1959. 161 were reported for the period 1956 to 1958 indicating that many more cases are now being recognized.[1]

Case Report

A. H., a 73 year old white male experienced an episode of extreme epigastric pain radiating to the back with diaphoresis and weakness one half year prior to admission. There was no nausea, vomiting or other bowel symptoms. He was admitted to another community hospital where his symptoms disappeared while under observation. Studies done at this time revealed "an unusual soft tissue density in the right upper quadrant" of the abdomen which was thought to be "a distended gall-bladder or fluid filled stomach or duodenal cap." A double dose gall-bladder series visualized the gall-bladder very faintly.

The patient was placed on a low fat diet and became asymptomatic until one month prior to admission when he had a similar attack of abdominal pain and was advised to have gall-bladder surgery. At no time was the patient jaundiced nor was there any mention of an abdominal mass.

Past medical history revealed long standing asthma with several hospital admissions and a right inguinal hernia repair in 1940. Diabetes mellitus was controlled with Orinase (R). The review of systems was negative except for symptoms of moderate prostatism and asthma.

Physical examination revealed a well developed, well nourished white male with labored respirations and a prolonged expiratory phase. There was an increased antero-posterior diameter of the chest with poor expansion. The prostate was moderately enlarged and there was a well healed right inguinal scar.

The diagnosis at this time was chronic cholecystitis with cholelithiasis. Examination of the blood revealed a hemoglobin of 12. 3 gms. per cent, a white blood cell count of 5,400, a fasting blood sugar of 103 mgms. per cent, a blood urea nitrogen of 13 mgms. per cent and an alkaline phosphatase of 1.3 units. The prothrombin time was 15 seconds, control 14 seconds. Urinalysis was negative. An electrocardiogram was normal.

At the time of operation, exploration revealed a diseased gall-bladder containing stones with a narrowed fibrosed cystic duct. The common duct appeared dilated and thickened. Upon opening the common duct, its size was fully appreciated for the first time. The wall was extremely thick measuring approximately 2 mm. Exploration of the duct revealed it to be approximately 5 cm. in diameter by 3 cm. in length with no apparent place of entry into the duodenum. Proximally the cystic duct and common hepatic duct were not involved in the dilatation. Through a long duodenotomy, no ampulla could be recognized. A small diverticulum in the mucosa was felt to be a possible sclerosed, retracted ampulla.

This was thought to be a choledochal cyst because the cystic and common hepatic ducts were of normal size and did not share in the dilatation or thickening of the wall. At this time it was thought the patient would not tolerate more extensive surgery and a choledochocystoduodenostomy was done and a drain placed in the foramen of Winslow.

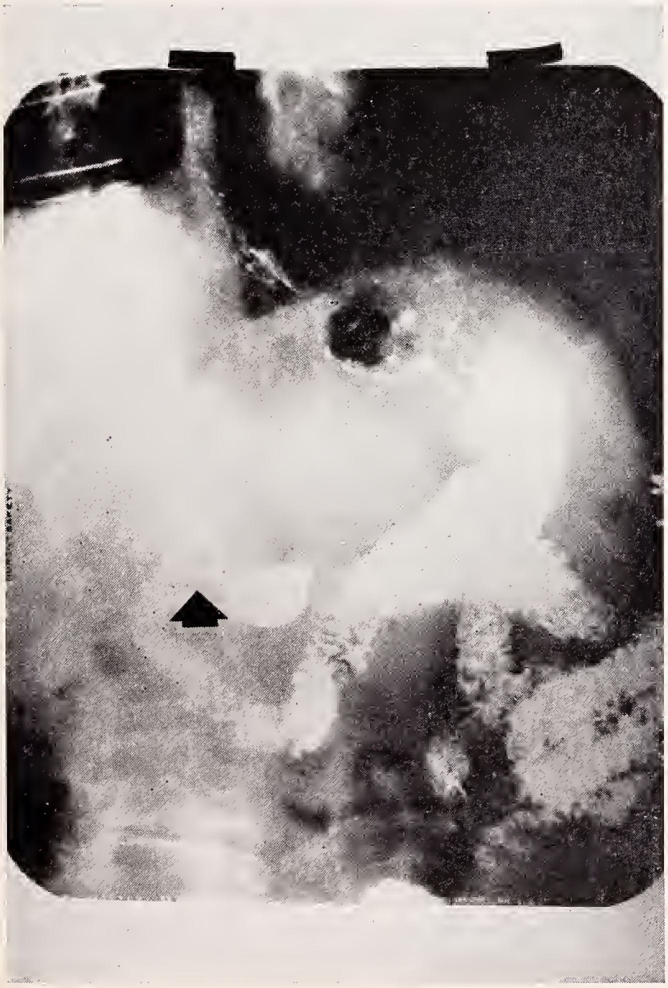
For several days after surgery the patient had urinary retention, several asthmatic attacks and T wave changes in the electrocardiogram. His diabetes was controlled with regular insulin and he had up to 200 cc. drainage per day of duodenal contents via catheter under suction which ceased completely after approximately two weeks.

A G.I. series, done prior to discharge revealed the suspected fistula. Repeat films taken seven weeks later revealed:

Photographs: Free flow of barium through anastomosis into biliary radicles without evidence of any extra hepatic obstruction.

Sketch I: Diagrammatically represents the condition as found at surgery.

Sketch II: Illustrates the end to side anastomosis between the cyst and the duodenum.

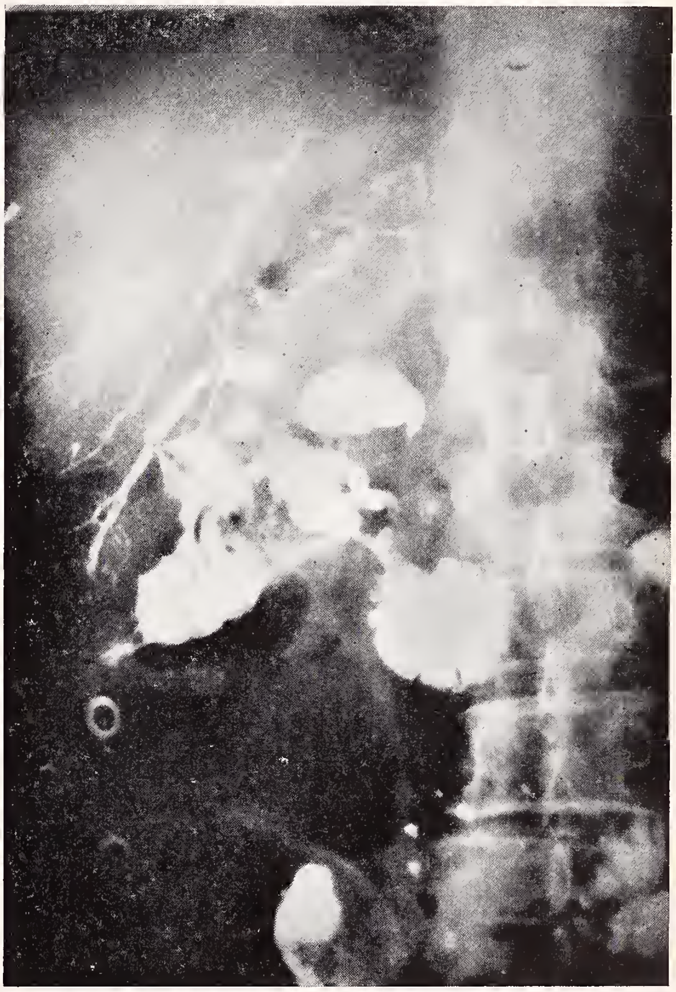


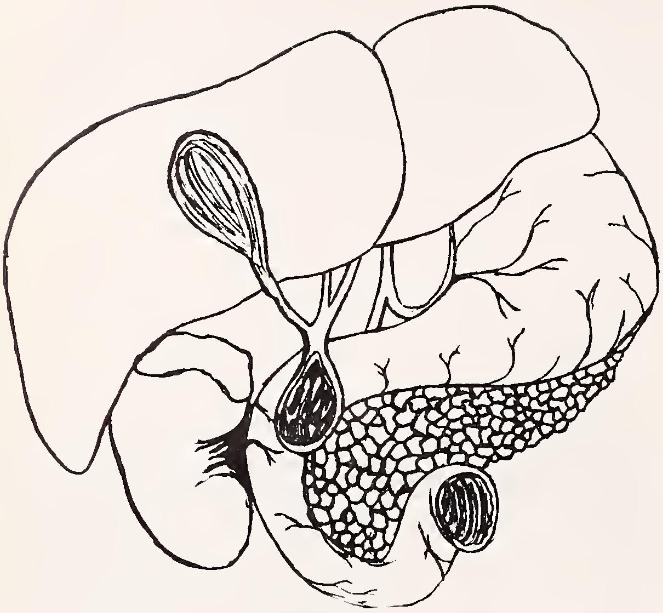
Incidence

Over 80 per cent of reported cases occurred in patients under 30 years of age,[1] and the disease is much more common in the female. Strangely, one third of all cases in the world literature occurred in the Japanese race, but there was no significant preponderance in the female.[1]

Etiology

Although this is a subject of much speculation, the theory having most favor at present is a com-





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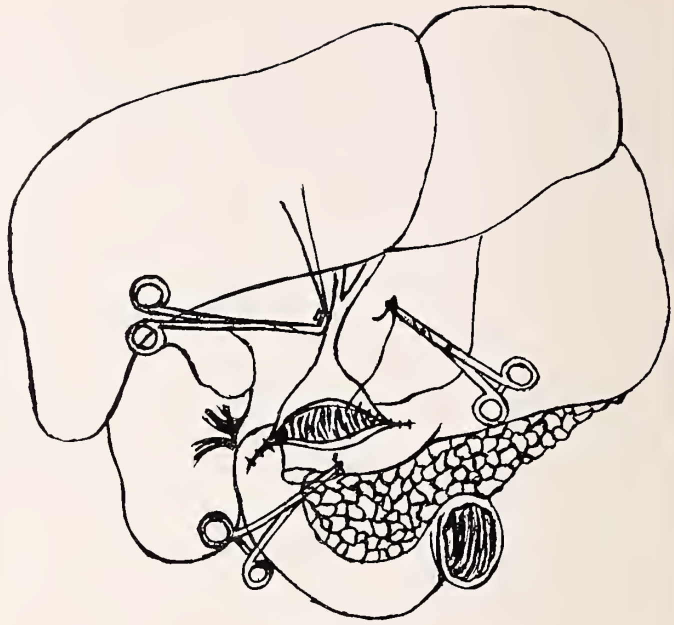

SKETCH II

bined one. This consists of a weakness in the wall of the common duct and some form of obstruction distal to it. This weakness is always congenital. The obstruction, whether congenital or acquired, can cause the dilatation, which tends to compound the obstruction.

Terminology and Pathologic Anatomy

While there are many names given to this entity, probably the best nomenclature is one based on the three main anatomic types of congenital abnormalities of the common bile duct. These are described by Alonso-Lej, et al[1] and the case reported above is considered to be a congenital cystic dilatation of the common bile duct. This is the most common type.

It consists essentially of a segmental dilatation of the common duct without associated dilatation of the cystic or hepatic ducts. Size varies greatly; the largest contained over 13,000 cc of fluid. The cyst wall is thickened, composed of connective tissue and seldom has an epithelial lining. While stones in the cyst are uncommon, cirrhosis, cholangitis and splenomegaly may be associated.[5,2] Cases of malignant degeneration have been reported.[6]

Congenital diverticulum of the common duct is very rare and is characterized by a diverticulum arising from the lateral wall of the duct.

Congenital choledochocele involves only the intraduodenal portion of the common duct, is usually small and its wall lined by duodenal mucosa.

Signs and Symptoms and Diagnosis

Pain, jaundice and a mass comprise the classic triad of this disease but it is usually impossible to make the diagnosis on clinical examination. Oral cholecystography rarely shows the cyst.[3] Even with various roentgenologic techniques a definite diagnosis can only be made at operation.

Treatment

There is no general agreement as to the treatment of choice as evidenced by the many surgical procedures advocated. Congenital cystic dilatation of the common duct seems best treated by removal of the cyst folowed by direct anastomosis between the common duct and the appropriate level of the small intestine.

Some authors favor an anastomotic procedure without the additional risk of the extensive surgery required for removal. Marsupialization is a temporary procedure and reserved as an emergency procedure in an acutely ill patient.[4]

Prognosis

There has been a great change in prognosis. Lange reviewed 53 cases, as discussed by Alonso-Lej,[1] with a mortality of 83 per cent in 1927. A recent review of 91 cases shows a mortality rate of 12 per cent. The change in mortality is due to recognition of the anomaly, improvement in operative procedures and a general improvement in care of the surgical patient.

With removal of the cyst the extent of the surgery is greater and the mortality higher. With anastomatic procedures, the mortality is lower but the morbidity higher.

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All Epilepsy Is One

All epilepsy is one unique disorder, evoked by any of a host of clinical pathologic conditions, and dependent upon characteristic disturbances in neuronal networks," says Dr. Roland P. Mackay. A most fruitful suggestion of Dr. Hughling Jackson was that there are many epilepsies, each of which corresponds to a different discharging focus. This concept led to a search into causative factors. The introduction of clinical electroencephalography further stimulated an increase in the subdivision of the epileptic state far beyond the classifications grand and petit mal.

"Thus, two forms of particularization about epilepsy were practiced—the one descriptive, or phenomenological; the other pathogenic, or etiologic—both supporting the concept of not one epilepsy, but many."

In epilepsy, however, correlations between clinical and electrographic findings are often nonspecific and are purely empiric. Division into "symptomatic" and "essential" epilepsy seems contradictory, and "idiopathic" epilepsy is meaningless. Because convulsions may be induced, in any subject by various means, "it becomes obvious that convulsibility is a trait common to all persons." Hence convulsibility is merely a matter of degree. Furthermore, the present explanation of "causes" of epilepsy is "impracticable."

"The neurophysiological essence . . . of the convulsive state is to be found in the unique and characteristic property of neuronal networks, which normally transmit impulses in an orderly fashion, of achieving a self-perpetuating hypersynchronous after-discharge, which spreads from its original focus to any or all other areas." This sequence occurs "in whatever animal it is studied, including the human, by whatever means it can be induced, and in whatever area of neuronal populations it is tried."

Grand mal, for example, is a degree and not a form of epilepsy. And the EEG "reflects the variety of the minor seizures in all their disparate foci of origin . . ." but shows "no unique pattern for major seizures." (*A.M.A. Arch. Neurol. 2:237, March, 1960.*)

PRURITIC DERMATITIS DUE TO DERMANYSSUS GALLINAE, THE AVIAN MITE

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A case of severe pruritic dermatitis caused by the pigeon mite, D. fallinae is reported.

One must also remember that in addition to its role as an etiological agent in the production of dermatitis in man, D. gallinae may also play an important part as the biological vector in the transmission of St. Louis encephalitis and Western equine encephalomyelitis. The virus pathogen of these two encephalitidies multiplies in the gut of the mite and is congenitally transmitted to the offspring. The mite in turn transfers the infection to birds and possibly to man at the time of a bite.

With the recent outbreaks of encephalitis amongst the pheasants and in the various bird farms throughout Connecticut it would be wise to keep in mind the possibility that this cosmopolitan mite may play an etiological role in the transmission of these serious illnesses from bird to bird or from man to man.

DERMANYSSUS gallinae, the avian or chicken mite is a small macroscopic mite which is oval in shape and looks like a small speck of black dust when seen with the naked eye.

It belongs to the group of Parasitoid mites (Parasitoidea) which resemble ticks more than mites but they are smaller and more delicate than ticks. It is a cosmopolitan inhabitant of chicken coops and pigeon and dove cotes. It parasitizes these birds and probably others but has been reported to attack man when the opportunity present itself. The mites live in cracks and crevices in the neighborhood of the host during the day and come out at night to feed upon the host.

Life Cycle of D. Gallinae

The chicken mite normally goes thru several developmental stages. The female lays eggs in the environment of the host which hatch in about two days under warm temperate conditions into a six-legged larval form. After another day or two the larva moults and goes thru two eight-legged nymph stages to reach the adult form. This whole cycle of development takes approximately eight to ten days to complete. Both the nymph and adult forms of the mite feed upon the host. There is still some controversy as to whether the mite depends for its nourishment upon tissue juice or blood which it sucks from the skin of the host.[1,2,3] In any case during the process of feeding, toxic salivary secretions are introduced into the epidermis of the host which in humans causes a very pruritic local dermatitis.[4]

Diagnosis

A diagnosis of D. gallinae infestation depends upon a history of contact with the natural host of the mite and demonstration of the mite recovered from the body of the victim.

Control

Since the parasite lives in the environment of the host and not on the host body, control measures consist of eradication of the mite from the environment. This would necessitate (1) elimination of the natural host (bird, birdnests) (2) spraying with DDT or a combination of Rotenone and Pyrethrum to kill the mite.

Treatment

The treatment is topical and palliative. Temaril (Trimeprazine*) by mouth and the topical application of Cortisone-containing ointment as used in the case to be presented was found to give symptomatic relief.

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Case History

A twenty-three year old white unmaried woman was seen for the first time in October with the chief complaint of severe itching of the skin of the arms, neck, lower legs and anterior trunk of several weeks duration. She was otherwise asymptomatic. Examination revealed the presence of discrete erythematous papules with numerous scratch marks. scattered over the arms, ankles, calves, back of the neck and abdomen. No rash or scratch marks were present between the toes or fingers, in the axillae, under the breasts or over the external genitaliae. Detailed examination failed to reveal chiggers, scabies or body lice. The patient stated that she lived in a second floor apartment in a downtown area and had no household animal pets or birds. No definite diagnosis was made at that time although it was noted that the red papules resembled sand fiy bites. Treatment was palliative and consisted of Temaril (Trimeprazine*) spansules b.i.d. which provided some symptomatic relief.

The patient was seen again the following year in August with the same complaint of intense generalized itching of the body, especially of the arms and legs. Examination again revealed the presence of numerous red papules and scratch marks some of which were infected on the back of the neck, lower arms, lower legs and trunk.

At the time of this visit the patient stated that the preceding evening while lying on a sofa which was situated in front of an open screened window she noticed sudden severe itching of her forearms. In the process of scratching herself she noticed several small black specs of "dust" on her arms. On closer examination she noticed they moved and more detailed observation revealed them to be minute insects. Further examination of her body and clothing disclosed several more. Investigation of the sofa on which she had been lying revealed that it was heavily infested with them. She removed several from her body and the sofa and placed them into a bottle which she brought to the office.

Examination of one of the tiny black specks under the microscope revealed an eight legged insect which resembled a very small tick. They were sent to the Connecticut State Health Department where a collaborating laboratory identified them as Dermanyssus gallinae, the chicken mite.

Further investigation of the patient's apartment found it to be heavily infested with Dermanyssus gallinae. They were found in her bed (between the sheets), in the sofa behind and between the pillows, in the bathroom in cracks and crevices around the sink, behind the toilet tank and bathtub, and in the kitchen behind the refrigerator and sink. All of the rooms in which the mites were found had permanent aluminum window screens.

After identification of the mite had been made, further questioning and investigation revealed that pigeons had been making their nests and roosting in the eves outside the patient's apartment windows for over two years. The mites had apparently gained access to the patient's rooms through the screened windows and established themselves in various recesses and cranies in the room and furniture. They had left their natural hosts, the pigeons, to parasitize the patient.

She was treated with Temaril (Trimeprazine*) by mouth and Neocortef ointment (hydrocortisone acetate with neomycin) topically which gave her good symptomatic relief.

Her rooms were thoroughly cleansed and sprayed with DDT. Measures were also taken to erradicate the pigeons.

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THEN AND NOW
1936 – 1961

August, 1961 marks the month in which we observe the twenty-fifth anniversary of the founding of the CONNECTICUT STATE MEDICAL JOURNAL, now known as CONNECTICUT MEDICINE.

If we were to interview those who were instrumental in founding the *Journal,* we would doubtless be told that at that time a need existed for a publication which would bring the doctors of the State information on new developments in medicine and news concerning developments in organized medicine throughout the State.

While CONNECTICUT MEDICINE has served those purposes well, a consideration of present-day problems in medicine can only emphasize the need for additional and more flexible means of communication, not only between the central office of the Connecticut State Medical Society and its members but also between the Society and the many paramedical groups which have come into the medical field and with the public at large.

From the nature of its function, each issue of CONNECTICUT MEDICINE requires months of study, review and planning, and even between compilation and issue a full month must exist.

In this day of rapid change, much that should be transmitted to the doctors by the Society would be history rather than news by the time such information reached them. So it is quite evident that inadequate communication exists, not only between the Society and its members but also in the as yet untouched field of the medical community.

Unquestionably in the near future those members of the Society charged with planning the future of organized medicine in the State will find it necessary to give serious thought to how the present day needs of communication in all its ramifications can be met.

It will require additional funds which can be met only by increases in State dues. It might be pointed out here that for the most part CONNECTICUT MEDICINE has been carried by its advertising which the newer types of communication cannot hope to do.

It is hoped that members of the Society and especially House of Delegate members will give serious thought to this matter in order that mature judgement can be available when it comes up for their consideration.

DENIS S. O'CONNOR, M.D.
Managing Editor

Major Medical For Over 65 Group

About the time that this issue of Connecticut Medicine reaches its readers, the first official information on the major medical insurance contract for the "over 65 group" by the Associated Group will be mailed out to the doctors of Connecticut.

This novel effort on the part of the insurance companies of Connecticut to provide retired people of the state with a major medical insurance plan over and above their Blue Cross, CMS or other basic coverage at a reasonable cost was authorized by the last General Assembly and represents a step forward toward continuing and expanding the opportunities to prepay the high quality of medical care to which the over-65 people of this state are accustomed.

Doctors are urged to be on the look out for this information in order that they may become familiar with the details of this new insurance plan and be able to discuss it with their patients.

The insurance companies of Connecticut are to be commended for their farsightedness and service interest in joining together to make this plan available.

D. S. O'C.

The Reduction of Obesity

While, theoretically, there is no such thing as a *normal* weight, no two people being exactly alike, it has been necessary for technical reasons that Life Insurance Companies establish weight tables, and it has been roughly estimated that one's weight at age 30 is frequently about the normal for a healthy person. However, some people are obviously too fat even in childhood. The actuarial studies of Life Insurance Companies demonstrate that the life expectancy of obviously obese people is decreased, roughly in proportion to the degree of overweight. Such individuals have an increased susceptibility to so-called degenerative diseases: arteriosclerosis, diabetes, nephritis, hypertension and the effects of arteriosclerosis on various organs and tissues.*

Some years ago when the writer was still in active practice he was consulted by an individual who might have been described in current verbiage as a V. I. P. He was a big man both physically and mentally and had been engaged for some years in an important administrative job associated with frequent lunches and dinners at which much more than the usual household meals was consumed. As a result, having an excellent appetite and digestion, he had put on a lot of weight which he asked the writer to reduce. He was put on a reducing diet, the Locke diet, after a thorough physical examination and the indicated laboratory tests had shown that, aside from his obesity, he was in good condition. He weighed 320 pounds in his examination outfit. He proceeded to carry out the dietary regimen exactly as directed and in about six months had lost 120 pounds. He received no medication and indulged in none of the local weight reducers which Arthur S. Flemming, Secretary of Health, Education and Welfare and George Larrick, Commissioner of the Food and Drug Administration, claim are of no value.† He subsequently returned to active life in a judicial position and lived to a ripe old age.

The main points to be emphasized in connection with such patients are:

1. that obesity is frequently associated with serious secondary ailments and

2. that all that is necessary to reduce obesity is strict adherence to a proper dietetic regimen.

G. B.

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* Wilder and Sprague in Musser's Medicine.

† The A.M.A. News, Sept. 21st., 1959.

Alcoholic Cardiomyopathy

Within recent times it has become known that alcohol is a frequent cause of heart disease. Why is it that this recognition has been so long delayed? William Evans[1] explains this neglect on the following basis. The condition develops insidiously. In the early stages there are few physical signs to bring it to the attention of the physician. When an arrhythmia arises its etiology is misdiagnosed. There is an erroneous assumption that the harmful effects of alcohol make themselves known as cirrhosis or a beri-beri syndrome. Certain clear-cut electrocardiographic changes and later cardiac enlargement with congestive heart failure are misinterpreted as being the outcome of coronary arterial disease. Finally pathologists do not pay sufficient attention to insular changes when examining a hypertrophic heart at necropsy.

The chief characteristic that marks the progress of the injurious effects of alcohol on the heart is the insidious way in which they creep in. It takes months or years before one becomes aware that cardiac involvement has indeed developed. When the symptoms are unmistakable they do not differ in any respect from those in patients whose hearts are damaged by other factors like coronary artery disease except that pain is generally not a symptom of alcoholic cardiomyopathy. But palpitation, various arrhythmias, and moderate breathlessness developing later into distressing breathlessness and increasing signs of pulmonary and venous engorgement, cardiac enlargement and murmurs caused by dilatation of the mitral and tricuspic rings are symptoms which are often confused with those arising from other causes.

Evans points out that the beri-beri syndrome is rare in alcoholic cardiomyopathy largely because the diet of his patients was not thiamin deficient. It is to be recalled that in the occident a syndrome similar to beri-beri in the Orient can occasionally be found in persons who consume large quantities of beer to the exclusion of regular and adequate meals.

The pathologic changes wrought by alcohol on the myocardium will be better appreciated now that they have been brought to the attention of physicians. They occur in two groups. In the "spare" variety careful search will reveal insular areas of fibrosis accompanied by variable degrees of cellular reaction. Clearly if such fibrotic scars lie astride the path of the conducting tissue disturbances of rhythm may be expected. In this type some enlargement of the heart and compensatory hypertrophy of the muscular fibers occurs. The more "gross" changes consist of larger more confluent areas of fibrosis often discernible to the naked eye and cardiac enlargement from compensatory hypertrophy of the muscle fibers is a more obvious feature.

If cardiac injury can be recognized when the "spare" variety of fibrosis has barely developed, such recognition can at this stage offer hope that the damage can be retarded and perhaps even reversed. But if the drinking of spirits be allowed to go on unheeded, then the damage will surely spread to involve large areas of the heart and cause it to fail. The author warns against the present habit of waiting for hepatic fibrosis to develop while ignoring cardiac fibrosis to grow until therapeutic management is no longer competent to bring about any material improvement.

The electrocardiogram has proved itself of great value in the diagnosis of alcoholic cardiomyopathy. In heavy spirit drinking patients over 80% revealed some form of abnormality or deformity of the T wave, a fault of conduction, and some kind of arrhythmia. Electrocardiographers who recognize "spinous", "cloven" and "dimpled" T waves generally report a non-specific T wave change. Perhaps the report could well be improved in such records by reporting findings that are consistent with alcoholic cardiomyopathy. The interesting feature here is that early in the development of the abnormal electrocardiogram reversal to normal patterns may be expected after complete abstinence from spirit drinking.

What kind of a patient is this? More often male than female, a successful man of business, usually overweight, somewhat breathless at the beginning, showing moderate tachycardia and frequent extrasystoles or even established atrial fibrillation. Cardiovascular derangements are generally absent. At the beginning the electrocardiogram can be a "princely test" for it will show distinctive signs that will compel a more searching questioning of the patient as to his drinking habits. Recognition of the illness at this stage is rewarding since abstinence of spirit drinking can halt the march of fibrosis in the myocardium.

If the physician misses the diagnosis or the patient ignores the advice on complete abstinence from spirit drinking, then the disease will progress relentlessly to an irreversible phase in which the heart develops widespread fibrosis and heart failure responding poorly to appropriate therapy.

There is an important lesson to be learned from Evans' studies. Alcoholic cardiomyopathy is a common condition, that it commonly goes unrecognized until it reaches a stage at which the myocardial fibrosis can neither be halted nor improved by any form of therapy, that abstinence from spirit drinking can arrest the myocardial injury in the early stages and for this reason the great need is for early recognition of the condition. A distinctive electrocardiogram can make this possible, and the responsibility of the electrocardiographer is to bring to the attention of the physician the existence of the electrocardiographic pattern of alcoholic cardiomyopathy.

L. H. N.

REFERENCE

1. Evans, W. Alcoholic Cardiomyopathy. Am. Ht. Jr. *61*. 556. 1961.

Live Polio Vaccine Effective In First U. S. Community Use

The first use of the Sabin oral live poliovirus vaccine in a community-wide immunization program in this country today was termed "highly effective."

A report on the project was made by Dr. Albert B. Sabin, Cincinnati, the vaccine developer, and five associates in the recent American Journal of Diseases of Children, published by the American Medical Association.

A total of 181,784 persons in Cincinnati and adjacent Hamilton County were vaccinated during the program which began in late April 1960.

"With the exception of a single imported case there were no cases of poliomyelitis either in the city or the surrounding county with a total population of about 940,000, thus achieving the objective of the vaccination program," the report said.

"The results obtained in Cincinnati in 1960, as well as those being reported from central and eastern European countries where community-wide programs of oral vaccination were carried out in 1960, indicate that in oral poliomyelitis vaccine we now have a simple tool with which the complete elimination of poliomyelitis can be attempted."

THE PRESIDENT'S PAGE

The year was one of the most eventful in the annals of the Connecticut State Medical Society. It was a year noted for the momentous decisions executed. The year was 1936. At that time, The House of Delegates ordered a major reorganization of the affairs of the Society, dividing the business of the Society into three distinct areas of activity, each under a separate secretary and all responsible to The House of Delegates. The three secretaries were, one for the administrative affairs, a second for scientific work and a third for legislative work. Prior to this time, the affairs of the Society in between meetings of The House of Delegates were managed by a volunteer secretary, Dr. Charles Comfort, in whose private office the affairs of the Society were conducted. This volunteer secretary was also the secretary for legislative affairs and spent a considerable part of his time in daily attendance at the Legislature when it was in session. His service was purely one of love for the Society. The secretary for administration was Dr. Creighton Barker, who was soon to be named the full time Executive Secretary for the Society. The secretary for scientific work was Dr. Stanley Weld, who, in addition to arranging for the scientific sessions of the annual meeting of the Society was now given the additional responsibility of being Editor of a new quarterly, "The Journal" of the Connecticut State Medical Society. During this month of August we commemorate the Silver Anniversary of "The Journal". It was not for long to remain a quarterly for on January 1, 1938 it became a monthly and has continued to be a monthly to the present time.

The office of "The Journal" was located in Hartford, first in and later near Dr. Weld's office, where, in addition to accumulating material for each issue, he ventured out on tours throughout the State, usually on Thursday when he spent the day soliciting advertisements for "The Journal". Later this chore of seeking advertisers was alleviated by the AMA sponsored Corporative Advertising Bureau. Dr. Weld still remains as Chairman of the Advertising Committee of the Bureau. During the early formative years of "The Journal" Dr. Herbert Thoms also gave generously of his time in the development of our monthly medical journal. "The Journal" grew and improved as years went by, so that one expert in the field of medical journal publication placed our State Journal among the five best State Journals being published.

Connecticut Medicine continues to serve the membership in keeping with its original purpose of improving communication between members of the Society, in keeping you informed, not only on scientific developments but also on organizational problems, the socio-economic issues of the day, which surprisingly were much on the minds of doctors in 1936. For an afternoon or evening of worthwhile relaxation obtain from your local medical library a copy of the early issues of "The Journal", and recall with appreciation those men who were leading the affairs of your Society in that critical year.

As our beloved Journal sights its course towards future anniversaries let us wish her well—thankful for the services for the past twenty-five years—mindful of the dedicated service of our Literary Editor, the Editorial Board, the Managing Editor and Assistant Editor. Many a member of the Society, just as I, am amazed at the efficiency with which *Connecticut Medicine* appears each month offering full coverage of current scientific and organizational news and all brought about by the unselfish devotion of persons dedicated to keeping you informed of your professional affairs.

In the words of the 1936 Chairman of the Council, Dr. James Douglas Gold "let us all put the best we have behind this venture, give all the assistance we can, having the well-being of our brother practitioners at heart and so make the journal worthy of the efforts spent in its compilation, showing to the profession of the State that the Society is alive. In so doing we shall further the efforts of the medical profession in carrying on as in the past, always having in mind the good of one's neighbor and the health and happiness of mankind".

Thomas M. Feeney, M.D.

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THIRTY-SIXTH CONNECTICUT CLINICAL CONGRESS

of the

CONNECTICUT STATE MEDICAL SOCIETY

and the

YALE UNIVERSITY SCHOOL OF MEDICINE

YALE-NEW HAVEN MEDICAL CENTER

September 27, 1961

The 1961 Clinical Congress will be concentrated in one day and all sessions will be held in the newly constructed Mary S. Harkness Memorial Auditorium in Sterling Hall of Medicine on Wednesday, September 27, 1961, from 9:00 A.M. to 4:30 P.M. This comfortable modern auditorium will accommodate an audience of 450.

The program for the 36th Clinical Congress will focus on diagnostic and therapeutic considerations of current importance in gynecology, internal medicine, pediatrics and surgery, with special emphasis on recent advances. Illustrative cases will be presented for discussion. The program will be arranged as a series of panel discussions by members of the faculty of the Yale School of Medicine.

Subjects to be discussed will include the following:

New Techniques of Tissue Diagnosis in Internal Medicine
Drug Therapy in the Newborn
Steroid Therapy in Children
Diagnosis and Management of Pelvic Tumors
Problems in the Management of Upper Gastrointestinal Hemorrhage

In addition to these sessions, there will be special clinical and scientific exhibits, and the program will include a Clinicopathological Conference.

The Yale-New Haven Medical Center is easily reached from the Connecticut Turnpike or the Merritt and Wilbur Cross Parkways. Ample parking facilities will be available in the medical center area.

Luncheon for visiting physicians will be served in the cafeteria of the Grace-New Haven Community Hospital.

The registration fee of $5.00 provides for admission to all sessions of the Congress. Hospital residents and interns will be admitted without charge, if a statement of their position, signed by an official of the hospital, is presented at the registration desk.

PLAN NOW TO ATTEND

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*
160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

A MESSAGE OF THANKS

After an enforced absence from St. Ronan Street of some eight weeks due to illness, the General Manager is gradually picking up the threads of his customary duties and expects to resume fully active status by the first of August.

Having abruptly come face to face with plain, unvarnished facts such as are associated with all serious diseases, this patient will state without reservation that based on his experience the quality of medical care in Connecticut is superb; that our physicians are skilled and highly competent and our hospitals modern, well equipped and staffed with trained personnel.

Over and above the wonderful professional care it was my good fortune to receive, I had it forcefully brought home to me once again that "man does not live by bread alone." The literally hundreds of kind expressions of good wishes for my recovery which came to me from so many different people were deeply appreciated, and I know that they helped very materially in promoting and sustaining the will to get well which is so vitally necessary to a prompt and uncomplicated convalescence. Recognizing that the pages of the Journal are not ordinarily used for the transmittal of personal messages to the Society's members, I trust that I will be forgiven if I take this opportunity to say "Thank you!" to everyone who sent me a message of good cheer. The fact that I could never hope to acknowledge all of them individually does not detract one whit from the depth of my gratitude.

William R. Richards, M.D.

COUNCIL MEETING

Wednesday, June 21, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman at 2:30 P.M., on Wednesday, June 21, 1961. Present in addition to the Chairman were Drs. Feeney, Deming, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Wilson, Ogden, Bradley, Grant, Rentsch, Gorman, Martin, Gevalt, Egan, Phillips, Hastings, Chartier. Also present: Dr. B. D. Thaw, Mrs. Josephine P. Lindquist, and Mr. James B. Burch. Absent were: Drs. Goldberg, Cornwell, Katzin, Murray, Jr., Purnell, Davis and Richards.

It was VOTED to approve the printed minutes of the meeting of May 4, 1961.

exemption from dues. It was VOTED to exempt the following members from payment of dues for the reasons indicated:

Patrick F. Swan, Hartford County, Postgraduate education, 1961-62. Lawrence A. Gardy, Hartford County, Postgraduate education, 1961. Saul J. Landau, New Haven County, Postgraduate education, 1961. Thomas F. Fogarty, Fairfield County, Postgraduate education, 1961-to completion.

resignations. *Connecticut Health League* — It was VOTED to accept, with regret, the resignation of S. Allison Rose, Stamford, as a representative to the Connecticut Health League for the two year term expiring in 1962. It was VOTED that the Councilor from Fairfield County consult with the Chairman of the Council about a suitable replacement and that the Chairman be empowered to make such appointment.

conference committee for the improvement and care of the patient. It was VOTED to accept, with regret, the resignation of J. Forbes Rogers, Stamford, as a member of this Committee. It was VOTED that the Councilor from Fairfield County consult with the Chairman of the Council about a suitable replacement and that the Chairman be empowered to make such appointment.

editorial board of the journal. It was VOTED to accept, with regret, the resignation of Allan J. Ryan, Meriden, as a member of the Editorial Board. On the recommendation of the Literary Editor of the Journal, it was VOTED to appoint Victor L. Szanton, Derby, to membership on the Editorial Board to complete Dr. Ryan's unexpired term.

congress on medical quackery. Upon receipt of an invitation from the AMA to send representatives to the Congress on Medical Quackery to be held jointly by the AMA and the Federal Food & Drug Administration in Washington, D.C., October 6, 7, 1961 at the Sheraton-Park Hotel, it was VOTED to send representatives to this Congress, at their own expense. Dr. Max Caplan, Meriden, informed the Council that he would be attending this Congress and it was VOTED that he be one of the Society's official representatives and that he be requested to report to the Council his reactions to the meeting.

RESOLUTION OF THE OHIO STATE MEDICAL ASSOCIATION. A resolution of the Ohio State Medical Association pertaining to rotating internships was received as information. The Council was informed by Dr. Cullen that the American Medical Association has this problem under consideration. It was VOTED to transmit this information to the Society's delegates to the AMA.

POLICY RE PRACTICE OF PODIATRY IN HOSPITALS. The American Academy of Orthopedic Surgeons submitted a statement of policy and resolution regarding the practice of podiatry in hospitals requesting the support of our delegates when the resolution is introduced at the AMA meeting. The following excerpts from the resolution outlines the principles to be endorsed:

1. Hospital medical staff privileges should be limited to competent and qualified physicians and surgeons and dentists and all patients will be admitted to hospitals by them except in emergencies.
2. The services of certain Allied Health Professions and Services which are necessary and proper to hospital function and treatments therein may be available within the limits of their technical skills, and the scope of their lawful practice, under the direction and supervision of a physician or surgeon member of the medical staff of the hospital.
3. Such services in hospitals should be assigned to one of the appropriate departments or sections charged with the responsibility for the medical care of surgical service that is involved.

It was VOTED that these principles be supported by our delegates to the American Medical Association.

RESOLUTION RE VOLUNTARY HEALTH INSURANCE. A resolution of the Medical Association of the State of Alabama pertaining to support of the principles of the Kerr-Mills Law was received as information. It was pointed out that legislation enacting the Kerr-Mills program has already been passed by the Connecticut Legislature, and no further action is necessary at this time.

MEDICARE. At its meeting of May 4, the Council referred the Medicare Contract to the Committee on Third Party Payments for study and recommendation with the notation that the Committee on Medicare Plan recommended its approval. The Committee on Third Party Payments in their report to the Council noted that, "The Committee feels that insufficient time was given to allow adequate study of this contract. Background facts necessary for full evaluation were not available. The Committee, therefore, neither approves nor disapproves this contract. The Committee on Third Party Payments recommends that all future Medicare Contracts be amended to include the following paragraph,

When a service is performed for a Medicare beneficiary who is also eligible to receive payments from other insuring agencies for the same procedure, the physician may make a charge in addition to the Medicare payment. The total charges to the beneficiary shall not exceed the total amount of actual payment by Medicare and the insurance company".

It was VOTED that the report of the Committee on Third Party Payments on the Medicare Contract be accepted, and that the Council accept the recommendation of the Medicare Committee to accept the contract for the current year. It was further VOTED that the Committee on Medicare Plan be notified to negotiate future contracts in accordance with the accepted report of the Third Party Payments Committee.

HEARING ON HR 4222, THE KING BILL, WASHINGTON, D.C. The Society has requested an opportunity to testify at the hearings on H.R. 4222 which will be held by the House Ways and Means Committee this year. All State Societies will not be granted the opportunity to testify, however, all may submit statements for the record. It was VOTED that Clifford W. Mills, Norwalk, Chairman of the Committee on National Legislation, be requested to be the Society's representative and that his expenses be paid from the general funds of the Society.

PROGRESS REPORT OF COMMITTEE ON RELATIVE VALUE STUDY. Dr. Benjamin Thaw, Hartford, Chairman of the Relative Value Committee, joined the Council and presented a progress report of the Committee and submitted an original schedule of some 2,100 procedures which took the Committee and its representatives nearly three years to complete. Following are some excerpts from his report:

"Because our list of services represented original work, it was found that a great deal of polishing would be required in order to avoid duplication, enable analysis and, most importantly, to reconsider whether this Survey was economically feasible. This has resulted in initial cost greatly exceeding the budget, but the amount and the degree of work involved could not be foretold and in effect should be considered well spent, inasmuch as it now allows a better view of the problems involved and will certainly result in saving far greater expenditures in the future.

"That the Survey be conducted on the basis of a curtailed but representative number of procedures rather than the entire list.

"It is hoped that the Council will act favorably in furthering the achievement of the Relative Value Study. Every member of the Council and, for that matter, every physician should be aware of the need of this study since in effect it expresses *our own* needs . . . It cannot be overemphasized that this is an expression of a need by our own physicians in Connecticut and is not a copy of someone else's work."

It was VOTED to approve the payment of $3,653.25 to the firm of Rogers, Slade & Hill and that this represent the first payment on the Relative Value Study.

It was VOTED that the Committee submit to the Society's office the complete but abridged schedule for retyping, and that this abridged list be submitted to a printer for cost estimates.

It was further VOTED to submit this abridged list to the firm of Rogers, Slade & Hill for their estimate on a "not to exceed" contract basis.

Dr. Thaw was given a vote of thanks by the Council for the outstanding job he has performed.

CONNECTICUT MEDICAL SERVICE. It was reported that the new Community Contract has been approved by the Insurance Commissioner. Mention was made that certain further changes in the Preferred Contract may be forthcoming, but no specific information was available at this time.

PHYSICIAN-HOSPITAL DISAGREEMENT. Dr. Feeney reported that the recommendations of the Council on March 16 to the hospital to grant a hearing to the physician had been carried out and that he was now in receipt of a communication from the physician that he was dissatisfied with the hearing granted him by the Executive Committee. It was VOTED that the physician be informed of the procedures of the Joint Commission on Hospital Accreditation and advise him that he must first appeal to the Board of Trustees or the Joint Committee of the Hospital and after this has been done and he has received a reply, he may notify this Society and a panel will then be appointed, if necessary.

COMMITTEE ON PUBLIC HEALTH. A request from the Committee on Public Health requesting approval of the transmittal of a letter from the Advisory Committee on Nutrition, concerning the national importance of nutrition, to various government officials was tabled.

It was VOTED to approve a request to send a member of the Committee on Public Health to the meeting of the American Public Health Association in Detroit, November 13-19, 1961, and that the approximate cost of $192.40 be charged to the Committee's budget.

It was VOTED that Dr. Franklin M. Foote be thanked for his assistance in financing the publication of the brochure, "Control of Staphylococcal and Other Hospital Acquired Infections."

Upon request that some official recognition be made of Dr. Joseph Hetzel's many years of service to the Committee on Public Health and its Advisory Committee on School Health, it was VOTED to ask the Committee on Public Health to prepare a resolution for presentation.

It was VOTED to approve the polio program as outlined in the pamphlets published in the U.S. Department of Health, Education and Welfare, "Public Health Service Action in Poliomyelitis Control, 1961, based on Recommendations of the Surgeon General's Committee on Poliomyelitis Control" and "Babies and Breadwinners."

It was VOTED that the film on the Polio Immunization Program of the Los Angeles Medical Association, produced and made available by Wyeth Company, be recommended to the county and city medical societies within Connecticut.

It was VOTED that the recommendation that elective mouth and throat operations be postponed during the polio season, which is defined as July 1-October 15, be left to individual hospitals for individual action.

A Schedule of Immunization submitted by the Committee was received as information.

RADIO PROGRAM PARTICIPATION. The Council received an invitation from WAVZ to participate in a program "Face the People" to discuss the subject of medical care for the aged on June 27th. It was VOTED that the Society is unable to provide a speaker for that date. It was further VOTED that if and when a second request came in, it be referred to the Committee on Public Relations.

REHABILITATION COMMITTEE. It was VOTED to approve a request from the Committee on Rehabilitation for an operating budget of $100.00.

RESOLUTION RE HOSPITAL-BED TAX. This resolution was originally received from the New Haven County Medical Association on April 12 and was referred by the Council to the Committee on Hospitals for study and report. The Committee submitted the following report:

"The Committee considered the material submitted most carefully and studied it critically and adopted the following action: That the Committee on Hospitals approves unanimously the resolution adopted by the New Haven County Medical Association concerning the "Hospital Bed Tax". The Committee also feels that this matter might well be discussed at a joint conference committee (Connecticut State Medical Society—Connecticut Hospital Association) in the near future."

It was VOTED to accept the report of the Committee on Hospitals.

NEWSPAPER ADVERTISING BY MEDICAL ASSOCIATIONS. National advertising programs by the AMA in which local medical associations are requested to participate have raised the question that in some states the tax status of local associations may be affected if such activities are undertaken. The Committee on Public Relations voted that this matter be referred to the Council for legal opinion. It was VOTED that the Legal Division of the American Medical Association be contacted for an opinion on this matter.

LEGISLATION—1961 CONNECTICUT GENERAL ASSEMBLY. Dr. Feeney reported briefly the actions taken on some of the bills in which the Medical Society had an interest during the 1961 Connecticut General Assembly with special emphasis on the bill permitting insurance companies to join together to offer to senior citizens of Connecticut, health insurance against major financial loss and the bill which provided for the implementation of the Kerr-Mills program in Connecticut. Dr. Feeney has been requested by Mr. Light, of the Travelers Insurance Company, that the insurance companies be given an opportunity to meet with representatives of the Society for the purpose of discussing this new insurance program developed by the insurance companies of Connecticut. It is anticipated that this new plan will be ready for sale about August 15, 1961.

It was VOTED that the President be authorized to call a meeting of the State Medical Society Officers, County Association Officers the Committee on Third Party Payments, and County Third Party Payments Committees for the purpose of meeting with insurance officials to discuss this program. (This meeting has been scheduled for July 11 at the New Haven County Medical Association Building.)

LEGISLATIVE COUNSELOR. A bill in the amount of $1,282.50 was presented from Mr. Joseph Cooney, Hartford, who was engaged as the Society's lobbyist for the biennium 1961-1963, council action November 16, 1961. Mr. Cooney reported that his annual fee would be $2,500.00. It was VOTED that the bill submitted by Attorney Cooney for legislative counseling be approved.

MEDICAL ASSISTANTS ORGANIZATION. The President presented a letter from Mrs. Henry Moore, President of the Hartford County Association of Medical Assistants, stating that local chapters of medical assistants have been organized in Fairfield and Hartford counties, but that before they could organize a state organization which would then become affiliated with the national organization, which has the approval of the AMA, it is necessary for them to obtain the sponsorship of the Connecticut State Medical Society. They also requested assistance to aid them in establishing a state chapter, such as stationery, postage, a meeting place, etc.

It was VOTED that the Society sponsor a state organization of medical assistants and to aid them, as requested, with such assistance not to exceed $250.00.

ADVISORY COMMITTEE TO COMMISSIONER OF CONSUMER PROTECTION. At the request of Attillio Frassinelli, Commissioner of Consumer Protection, it was VOTED that the Chairman of the Council and the President appoint three members of the Society to serve as an Advisory Committee to Commissioner Frassinelli.

MAL-PRACTICE COVERAGE. At the request of the Councilor from Fairfield County, it was VOTED that the Committee on Medical Economics and Insurance investigate whether mal-practice insurance will cover civil suits for assault and battery when associated with medical practice.

RADIO DEBATES. It was VOTED that the Council commend Dr. Feeney and Dr. Davis for their performances on the radio program, "Controversy". The Chairman of the Council presented a report from Dr. Davis outlining his experience and conclusions on the debates.

GENERAL MANAGER. It was VOTED that the Council express their best wishes for a complete recovery to Dr. Richards.

DATE OF NEXT MEETING. It was VOTED that the Chairman shall determine the date for the next meeting of the Council.

Medicare

The Society's headquarters is in receipt of the following directive from the Office for Dependent's Medical Care concerning the procedure to be followed by estates of physicians in preparing claims for services rendered military dependents. (ODMC Ltr. 1-61)

CLAIMS FOR SERVICES RENDERED BY PHYSICIANS OR DENTISTS NOW DECEASED

1. a. Rescinded: ODMC LETTER No. 11-58 dated 18 April 1958 is rescinded effective 30 June 1961.

b. The provisions of this letter will become effective 1 July 1961.

c. The following requirements and procedures relating to the acceptable method by which claims for service rendered by physicians or dentists now deceased may be accepted and processed upon submission by personal representatives, executors, etc. are furnished for the information and guidance of all concerned.

2. a. In such cases, the DA FORM 1863 should be executed as in other routine cases, with one exception. The certification set forth below should be accomplished by the deceased physician's or dentist's personal representative in lieu of the

certification in Item 29 on the form and should be attached to the claim form:

CERTIFICATION AS TO SERVICES RENDERED BY PHYSICIAN OR DENTIST NOW DECEASED

> I certify that the attached statement is true and correct and that payment due from the Government under P. L. 569 has not been received; that said statement is for services which were rendered by Dr. ——————— as the attending physician (dentist), or, as authorized by the attending physician (dentist); that he was not an intern, a resident, or otherwise in a training status at the time he rendered the care; that, except for the amount shown in Item 26, I will accept as full payment for services rendered by him and covered by P. L. 569 the amount of his usual fee shown in Item 24, or the amount finally approved by the Government, whichever is less. Services included in these charges in Item 24 which were of unusual degree involving excessive effort are explained by the attached Special Report. My acceptance of any amount from the Government for care included in this statement and authorized under P. L. 569 will preclude me from accepting any amount therefor from the patient or other source in excess of that shown in Item 24.

b. In addition, evidence should be submitted to show the signatory's status as the personal representative of the physician's or dentist's estate—e.g., letters of administration, copy of court order appointing the person as executor, or other documentary evidence of the fact that the person is the personal representative of the deceased's estate.

c. Evidence should also be submitted sufficient to corroborate the fact that the services described on the DA Form 1863 were actually performed. The physician or dentist could have stated from personal knowledge that he performed the services; the personal representative may not have knowledge of the fact. The corroboration should be by someone having actual knowledge that the services were performed by the named physician or dentist—e.g., a hospital administrator or other hospital personnel, a partner of the physician or dentist, an office assistant to the physician or dentist, or the patient involved.

d. Checks drawn by contractors may be drawn payable to the order of the legal representative of the estate of a deceased physician or dentist. The payee on the check will be named as follows:

EXAMPLE

" James Smith , Executor
(Administrator etc.) of the estate of
John Doe , Physician
(Dentist)."

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e. Claims of dentists with all supporting documents should be forwarded to the Office for Dependents' Medical Care, Washington 25, D. C.

3. The documents listed in paragraphs 2a, b and c, *supra*, should be securely attached to the claim form for record and audit purposes.

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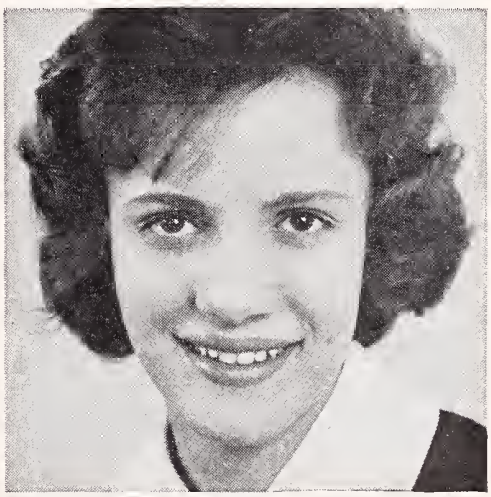

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Special Article

SOME PSYCHOLOGICAL ASPECTS OF THERAPY WITH DRUGS

William Kaufman, m.d., *Bridgeport*

PART IV

Treatment with some potent drugs may put the patient's emotional stability to a severe practical test despite the doctor's best efforts to prepare him for the rigors of therapy. Not all adverse reactions are predictable, but at least some result from inadequate clinical study of the patient before therapy with drugs.

A doctor's prestige, professional reputation, and even his livelihood may depend on his skilful use of medications in the treatment of sick patients. The wise doctor is not stampeded into getting on the therapeutic merry-go-round, but thoughtfully selects those medications which seem likely to offer his patients the greatest benefits with the fewest risks.

ADVERSE DRUG REACTIONS

Unfortunately, many drugs used in therapeutic doses do have in their spectrum of pharmacodynamic action certain undesirable side effects which may act as a noxious psychological cue, inducing unpleasant emotional and psychosomatic reactions.

What may be an undesirable side effect of drug action in one instance, may in another be a therapeutically useful action of the medication. For example, if an anti-histaminic drug used during the daytime creates marked drowsiness, it is hazardous for the patient to take it then since drowsiness may predispose him to accidents and prevent him from having the mental keenness his work requires. Thus, for daytime use, he should take an antihistaminic which does not have the side effect of marked drowsiness. But for an allergic patient who also has insomnia, an antihistaminic which causes marked drowsiness in ordinary therapeutic doses may have great value when taken at bedtime.

Some drugs require concomitant or subsequent use of other medications to fight side effects or complications of drug therapy. For example, the use of broad spectrum antibiotics may later require the use of anti-monilial agents; the emergence of antibiotic-resistant strains of disease-producing bacteria may require the use of a host of different antibiotic agents, one more hazardous to use than another, to effect a cure; an allergic reaction to penicillin of the serum sickness variety may require the use of prednisone, and antacids to prevent occurrence of peptic ulcer; the use of hexamethonium may require laxatives and other agents to control constipation. Many patients resent having to take medications for the control of avoidable or unavoidable drug-induced iatrogenic ailments.

Treatment with some potent drugs may put the patient's emotional stability to a severe practical test despite one's best efforts to prepare him for the rigors of therapy. For example, the patient whose blood pressure is being lowered from hypertensive to lower levels with a ganglionic blocking agent, may have to contend with such unpleasant side effects as constipation, visual blurring, glaucoma, inability to empty his bladder at times, impotence, and episodes of orthostatic hypotensive faintness. Even an emotionally well adjusted person would find it hard to put up with these troublesome side effects of therapy, though such treatment might prolong life and prevent hypertensive complications.[43] The physician who prescribes many of the modern drugs has to be reasonably sure in his own mind that the potential benefits to the patient outweigh the potential drawbacks and harmful effects.

Not all adverse reactions to drugs are unpredictable. Sometimes in retrospect the doctor may realize that he could have predicted and perhaps avoided the occurrence of certain adverse effects if he had in the first instance made a more careful clinical examination of the patient. For example, administration of dicumarol in average doses to a person with myocardial infarction and unsuspected liver disease may produce serious hemorrhages; administration of digitalis to a person with cardiac failure who has experienced moderate uncompensated potassium losses may favor the appearance of digitalis intoxication; persons with myxedema or adrenal hypocortical function may have excessive depression of the respiratory center from "average" doses of morphine; and negroes with a discoverable genetic defect in the red blood cells' enzyme content may develop a hemolytic anemia from administration of certain synthetic antimalarials.[9] In addition, patients who have previously had allergic reactions to the same or other drugs, or to inhalants, contactants or foods, seem much more likely to develop adverse reactions to medications than those who have not had such allergies.

However, in most instances it is impossible to predict which patient will develop adverse reactions to a given drug. Furthermore, some drugs in common use have such serious complications as exfoliative dermatitis, agranulocytosis, pancytopenia, hemolytic anemia, thrombocytopenic purpura, peripheral neuritis, deafness, loss of balance sense, periarteritis nodosa, acute yellow atrophy of the liver, suicidal depressions, lupus erythematosus-like syndrome, rheumatoid arthritis-like syndrome, Parkinson-like syndrome, and peptic ulcer. Because many drugs cause serious and sometimes wholly unexpected reactions including sudden death, the doctor should not rush to prescribe drugs (particularly new ones) unless there is a very good indication for their use.[8, 11, 21, 23] A powerful pharmacodynamic agent should not be used when a symbolic medication is all that is required.

EFFECTIVENESS OF DRUGS

Conscientious doctors are often troubled because frequently there is no objective way of judging the effectiveness of a drug being used in treatment. Even such relatively objective measures as the determination of blood pressure of a patient under therapy with an antihypertensive agent may depend more on the enthusiastic doctor's influence than on the pharmacodynamic action of the drug.[29, 40, 53] To depend on what the patient says about the way he feels, and to observe how he acts, may disclose merely his unconscious reaction to the symbol of the medication being administered, and to the symbol of the doctor who prescribes it. It is interesting that when a patient receives a medicine from a well-known consultant whose fees are high, the remedy may be much more effective than when it was prescribed by the family physician. This is in a sense prestige therapy in response to the symbol of the "big" doctor, and the general belief that the most expensive advice is the best.

How can one judge the value of a medication one prescribes for a patient?[8, 11, 21, 23] Some benefits of therapy are clear: of prostigmine in treatment of myasthenia gravis, of insulin in diabetes, of penicillin in therapy of beta-hemolytic streptococcal sore throat; the effects of adequate niacinamide therapy on joint mobility,[30, 31] or the effect of the corticosteroids in treatment of Addison's disease of the adrenal glands. Less certain are the benefits of barbiturates used as sedatives, and such drugs as the anorexogenic agents, antispasmodics and many tranquilizers. In medical practice, the doctor has to use his clinical judgment and what the patient says about the way he feels as guides to the value of medical therapy. If the patient says he feels better or well, and the doctor has no reason to believe otherwise, then this therapeutic end-point is all that both want—even though this assessment is "unscientific" and may represent the patient's psychosomatic reaction to the symbol of medication and to the doctor's conscious or unconscious psychotherapy, rather than the action of the pharmacologic agent employed. However, it is wise to use with discretion whatever objective tests we can to measure various aspects of the patient's health in response to therapy.

FEAR OF RADIOACTIVE MEDICATIONS

Diseases in our atomic age may have to be studied or treated with radioactive materials. Many patients accept atomic medications as a matter of course, and may even be pleased that they can have such treatment instead of surgery of the thyroid gland. But others develop severe anxiety and even panic reactions if the doctor merely mentions that a radioactive material will be administered in the study of the ailment. The patient should be encouraged to talk about his fears, which are usually based on misinformation about the effects of radioactivity. Then the doctor can help him understand that an atomic medication such as I_{131} can be used in testing thyroid function without danger of immediate or delayed untoward effects, and when used in treatment of thyroid disease it has predictable transient side effects in addition to the therapeutic effect. The side effects may include some sense of soreness of the throat, slight discomfort on swallowing, minor discomfort on speaking, tenderness over the thyroid gland—but all these reactions disappear within a few weeks of administration of radioactive I_{131}. And the patient has the therapeutic benefit of reduced thyroid function from that point onward. The patient is told that if he had had surgical treatment, there would have been immediate post-operative discomfort and subsequent scarring at the site of surgical operation. Often, this simple explanation relieves him of fear and tension and at the same time secures his co-operation in taking radioactive materials.

THE DOCTOR

A doctor's prestige, professional reputation, and even his livelihood may depend on his skilful use of medications in the treatment of sick patients.

Although the patient may have confidence in his doctor, many forces at work in the social milieu are constantly undermining this relationship. There are well-meaning friends and relatives who, when they learn of the patient's ailment, immediately have therapeutic suggestions to make which always seem to be at variance with what the doctor has suggested. Each person may feel that he knows just the right specialist or the miracle remedy which will effect a cure. The specialist may be anyone from a faith-healer to a certified specialist—the miracle remedy, anything from cow's dung to a drug which has just been mentioned in the newspapers as having shown promise in initial investigations. Sometimes a friend or relative in a social situation manages to have an informal consultation with a doctor, nurse, hospital attendant, medical student or anyone else, about the proper treatment of a patient with such-and-such a condition, and passes along the advice received.

If the patient is very suggestible or dependent on others, he will then try to persuade his own doctor to try everything that has ever been rumored to have a beneficial effect on illnesses such as his. If the doctor doesn't comply, the patient may change doctors again and again until he finds one who will do as he wishes. This problem is best managed with some firmness. The doctor sets the course of therapy but remains open to reasonable suggestions regarding consultations and trials of various types of therapy which might prove useful, but firmly opposes suggestions that seem silly or likely to bring harm to the patient.

As far as I know, no thoroughgoing multidimensional psychological study has been made to explore how a doctor's age, training, personality traits, attitudes toward patients and medical practice, sex, family obligations, economic goals and personal health may influence the kind of patients he sees and the kinds of medication he uses. For this reason, I shall limit my remarks about doctors to three well-known types: the ultra-conservative, the over-enthusiastic, and the wise doctor.

The ultra-conservative doctor may be fearful of using potent medications which effect cures but at the same time have caused untoward side effects in a considerable number of patients. He will tend to use the older drugs, and sometimes in doses which are completely inadequate from a pharmacologic point of view. In fact, using them in this way, he is actually using small doses of the potent agent as a symbolic medication, even though he himself may not appreciate this fact. When antibiotics are so used, they may not check infection but favor the emergence of resistant organisms which make the infection more difficult to treat than ever. The doctor gives the patient sympathy, understanding and emotional support, but deprives him of the pharmacodynamic benefits of medication and at the same time exposes him to possible idiosyncratic and allergic drug reactions.[27]

As part of his medical philosophy, the ultraconservative physician will not use new drugs until years of trial by others more venturesome have proved them safe. Thus he cannot treat effectively those diseases which can be ameliorated or cured today only by the use of powerful but potentially harmful drugs. In effect, some doctors in this group limit their practice to an old-fashioned, practically drugless form of psychotherapy in which symbolic medications play a prominent role.

At the other extreme is the over-enthusiastic doctor who is always eager to use newly released drugs even before their uses and contra-indications are fully understood. Sometimes he feels that if he is first in his community to use a newly released drug, his patients will believe him to be constantly alert and keeping up with the latest progress in medicine. He avidly reads all the brochures he receives about newly released medications, especially about the recommended doses.[10,38] He often has a very forceful personality, has little use (or time) for psychotherapy, and has not learned how to use inert symbolic medications for the best advantage of the patient, although he pushes the symbolic aspects of potent pharmacodynamic agents. He may recurrently use potent pharmacodynamic agents to treat each symptom the patient presents, sometimes in a manner not recommended even by those pharmaceutical companies which developed them. One thing seems likely: the patients of this doctor are likely to experience both the benefits and the complications of modern drug therapy.

The wise doctor does not allow himself to be stampeded into the use of newly heralded miracle drugs which may prove in time to be both ineffectual and dangerous. He is studious, thoughtful, honest and courageous. He studies his patients carefully and refuses to use any medicines if he believes the risks of therapy vastly exceed those of the disease. At times he may take a calculated risk, using a potentially dangerous drug if this may give the patient his best or only chance for recovery from a dangerous illness.

If he feels he is making no headway in medical treatment, he will not jump on the therapeutic merry-go-round, trying one new drug after another, hoping to hit accidentally on just the right one to relieve or cure the patient's illness. Instead, he will ask for a consultation with a more experienced colleague who might have something of value to contribute to the strategy of therapy with drugs.

The practice of medicine can be frustrating and stressful. Quite apart from the difficulties of making correct diagnoses,[47] sometimes we have to treat diseases for which there is as yet no cure, and sometimes use drugs which may cause unpleasant side effects or severe drug reactions. But with growing clinical maturity, a doctor can develop the art and science of dealing effectively with the difficult psychosomatic, chemotherapeutic and pharmacodynamic problems of drug treatment, to help patients more than has ever been possible before.

SUMMARY

The treatment of a patient with medications is not a simple matter. Many different kinds of people with different therapeutic goals seek treatment. They suffer from different diseases at different stages of development. Drugs may be available for cure, maintenance therapy or symptomatic treatment. The doctor's personality may influence the choice of drugs and the degree of emotional support he offers his patient. The patient's total response to drugs depends on his personal goals, past conditioning to disease, doctors, drugs, the complications of treatment with drugs, and the strength of the patient-doctor relationship.

Each drug is symbolic medication in addition to any pharmacodynamic action it may have. The response to the symbol of medication has been studied by observing the effects of inert substances administered to patients with a wide variety of ailments. Although about 35 per cent of patients experience no benefits in response to administration of symbolic medication, about 33 per cent have complete relief of symptoms, about 15 per cent have adverse effects, and the rest have admixtures of both beneficial and adverse effects. The beneficial effects of a symbolic medication may resemble qualitatively and quantitatively those one might expect if a powerful pharmacodynamic agent were used—and the adverse effects may also resemble those of potent pharmacologic substances. A patient's emotional state at the time the inert symbolic medication or the potent pharmacologic agent is administered affects the nature of the response obtained.

A patient should be forewarned of possible toxic, idiosyncratic, histamine-releasing and allergic drug reactions. Should any of these occur he should report these at once to the doctor, who should stop the offending medication and take steps to minimize as much as possible the adverse reaction. Allergic individuals and those who have had adverse drug reactions in the past are likely to have adverse reactions to drugs in the future. When a drug is prescribed, precautions should be taken to minimize the likelihood of drug reactions, and to maximize the likelihood of their early detection. A potent pharmacodynamic substance should not be prescribed when a symbolic medication would be effective.

Many drugs adversely influence the workings of the mind, causing symptoms which may be disadvantageous or dangerous. Therapy with potent pharmacodynamic agents may provide the patient with benefits but at the same time create unavoidable undesirable side effects which are part of the pharmacodynamic spectrum of the drugs used; this may require concomitant therapy with other potent pharmacodynamic agents which may in turn produce adverse reactions. Thus, therapy with drugs may put to a severe practical test the patient's capacity to make major emotional adjustments to his disease and therapy.

In chronic ailments which require constant taking of medications to sustain life and to maintain reasonably good health, a patient may suddenly deny illness by abrupt cessation of necessary medication—a symbolic act of self-destruction. A doctor should be alert to prevent this from happening if possible, by seeing the patient often enough and giving him emotional support to help him face the rigors of chronic illness.

The quandary facing every doctor today is: should he use the latest medications as they become available for treatment of many syndromes and diseases? The ultra-conservative doctor by his reluctance to use newer medications may fail to provide his patients with some benefits, but at the same time spares them possible ill effects from their use. The over-enthusiastic doctor who rushes to try every new medicine that comes along will give his patients the benefits of such treatment, and also the greatest chance for adverse effects. The wise doctor is not stampeded into getting on the therapeutic merry-go-round, but thoughtfully selects those medications which seem likely to offer his patients the greatest benefits with the fewest risks.

(This is the last of a series of four articles).

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Clinical Medicine

CONNECTICUT'S MEDICAL PROFESSION PLAYS ITS PART IN PROMOTING THE HEALTH OF THE SCHOOL-AGE CHILD

Martha L. Clifford, m.d.,* *Hartford*

PART IV

The Direction the Medical Profession May Move: Communicate With Educators for a Common Stake in the Atomic Age.

Physicians have a big stake in the preparation of today's youth to fill their proper role in the atomic age. The school children of today will be the responsible citizens of that age. They need preparation of a new and a high order to carry the burden which lies ahead—the cold war. The cold war of today where forces of freedom and justice are struggling to prevail over repression and fear should alert the medical and education professions to combine their skills for the best possible preparation of our school children.

Typical questions which still need answers in the local community and which are of interest to physicians are:

1. How can doctors find out whether school health services are well-administered and adequate?
2. How can medical recommendations relating to the school health program be appropriately transmitted to educational authorities?
3. If the school conducts a competitive sports program for only a few children and the others have little physical activity, how can a physician in private practice help the children who need more exercise?
4. How can the private physician's advice for a given child reach the teachers to benefit the boy or girl concerned?
5. If parents are ignoring signs of emotional stress in their children, how can teachers become more capable of handling problems in these children, and how can the family physician assist such improvement?
6. If parents are ignoring the need for dental care in their school child, what can be done to help the situation?
7. How does the physician enter into classification of students for physical education?

If any of these have occurred to you, we hope that the first three articles in this series have been provocative and that by reading this fourth and final article, you will gain new insight into practical steps the local medical profession can take in promoting the health of the school-age child.

At the First Connecticut Conference on Physicians and Schools held in 1955, 76 practicing physicians and 14 educators attended; at the Second Connecticut Conference held in 1957, the numbers were 49 and 42. Obviously this is a sound but rather slow way of making an appropriate and pleasant setting for Connecticut physicians and educators to meet. Now that the American Medical Association nationally and the Connecticut State Medical Society statewise have set the pattern for sponsoring conferences, has the time come when local medical societies or groups of physicians can follow their example and serve as host to a local conference of physicians and educators? If not, why not?

A high level of physical and emotional health, coupled with a high level of learning, will enable our young people to cope more readily with the ever-increasing complexities of their environment. This is a time when educators are re-evaluating and seeking with the rest of us a better understanding of man's motives and the meaning of his existence. When meaning for existence becomes motivated for service rather than for power, we need have no fear of man's curiosity and thirst for knowledge. Educators and physicians seem clearly to be motivated for service and for services needed by people. Moreover, these two professions are trained in the facts of human nature. They know that personality development is dependent upon human relations or, if you will, human partnerships. The strength and resiliency of the personalities of our children can be increased by an active partnership of educator and physician in the community of these children. "To whom much is given, of him shall much be required."

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* *Director, Community Health Division, Connecticut State Department of Health.*

Connecticut State Medical Society invited and sent Dr. Clifford to represent the society at the Sixth and Seventh National Conferences on Physicians and Schools.

Such a partnership between educators and physicians should take into consideration the already existing time schedules and traditionally established prerogatives of each profession. Educators know there is a certain rhythm to the academic school years for which they must plan. The practicing physician has an office routine which enables him to devote his time to his patients. Such routines help in the success of teaching and medical practice, and allow the educator and physician more time for family and friends.

For more than 50 years, organized medicine has been cooperating with educators in promoting the health of school children. Since 1911, there has been a Joint Committee of the National Education Association and the American Medical Association on Health Problems in Education suggesting policy and practice for sound programs in the schools.

Connecticut has in many respects a better than average economy, and a history of public spirit among its citizens. Connecticut, which has produced such men as Horace Bushnell of education fame, and "Popsie" Welch who became one of the fathers of public health through his work at Johns Hopkins, and many other leaders in education and medicine, should have a good prospect of achieving the best kind of service for its school children.

A very important part of the physician's service to society is carried on in his private office. Moreover, the quality of care he renders to individuals determines to a large measure not only their individual health but also affects the health and welfare of their families and neighbors. There is another way —and another place in which physicians promote the general welfare—namely in sharing some of their knowledge of medical science with persons who have a heavy responsibility for the total development of children, namely the educators.

The educator is a man of training and vision. The educator in an administrative position must guide wisely the total educational program under his jurisdiction. He confers with his fellow educators and works out plans with his board. He uses the interest of citizens who can contribute to the richness of his school program. A man with a busy schedule, his first interest is in making sure that the educational program provides the best ways the school can improve the child's opportunity for learning. He is also interested in the child's ability to see, to hear, to take part in school activities, and in his general health and well-being.

Frequent communication between the practicing physician and the educator brings advantages to both professions as well as children and youth as information from medical science becomes more useful in the school health program.

The reader is probably eager to have certain questions related to the complex subject of school health programs answered. The wide variation of services and of qualifications of persons rendering services in all the widely differing communities makes the answers dependent upon the conditions in each community. The underlying principles, however, are quite uniform. If conversant with conditions in their towns and in their schools, the educator and the physician can apply their respective professional skills, combine their knowledge, and make suitable suggestions. For simplicity in presentation here, nothing has been written about the part played by other professions such as dentists and nurses, by the health department, and by others concerned with a school health program. This would require an additional paper. But the underlying principles are the same, and there is a continuing need for communication between the educators and the physicians.

Even in a small town the difficulty of "timing the meeting ground" for the educator and the physician seems to be a fact deserving attention. What they need is a host. The American Medical Association has set the example nationally of being host for a conference on physicians and schools. Several state medical societies have been host in bringing together members of the education and medical professions in different states.

When as physicians we consider what is at stake for the future citizens who must cope with a cold war and an atomic age, we should take time and friendly initiative to work with the educators in each of our towns. An acceptable pattern has been suggested and it is commended for use by the local medical organization.

Once acquaintance of the educator is made and the timing of the sessions decided upon, the educator and the physician should each feel that there is no conflict in motives because the total health of the school population is of equal concern to each of them. If in any place there are even small frictions, they can be replaced by diligent efforts of reconciliation. There will need to be time for long discussions occasionally because the planning of methods does take time. Such time is well spent if thereafter the best use is made of medical time and manpower. The methods used will vary from community to community depending upon existing problems and the number of physicians and other health trained persons available.

SUMMARY:

The chief aim of these articles has been to show you, as a practicing physician in Connecticut, that you personally through your local medical organization can and should take a friendly initiative in becoming acquainted with the school administrator in your town. Usually a courteous and enthusiastic response is to be expected because the goal is healthy school children who learn to the best of their abilities.

ACKNOWLEDGEMENTS

Thanks are given to Fred V. Hein, Ph.D. and Ruth V. Byler, Ed.D., for their suggestions in preparation of these articles.

(This is the last in a series of four articles.)

TIME OUT. . . *to mark this special day on your calendar*

SEPTEMBER 27, 1961

36th CONNECTICUT CLINICAL CONGRESS
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Connecticut State Medical Society
and
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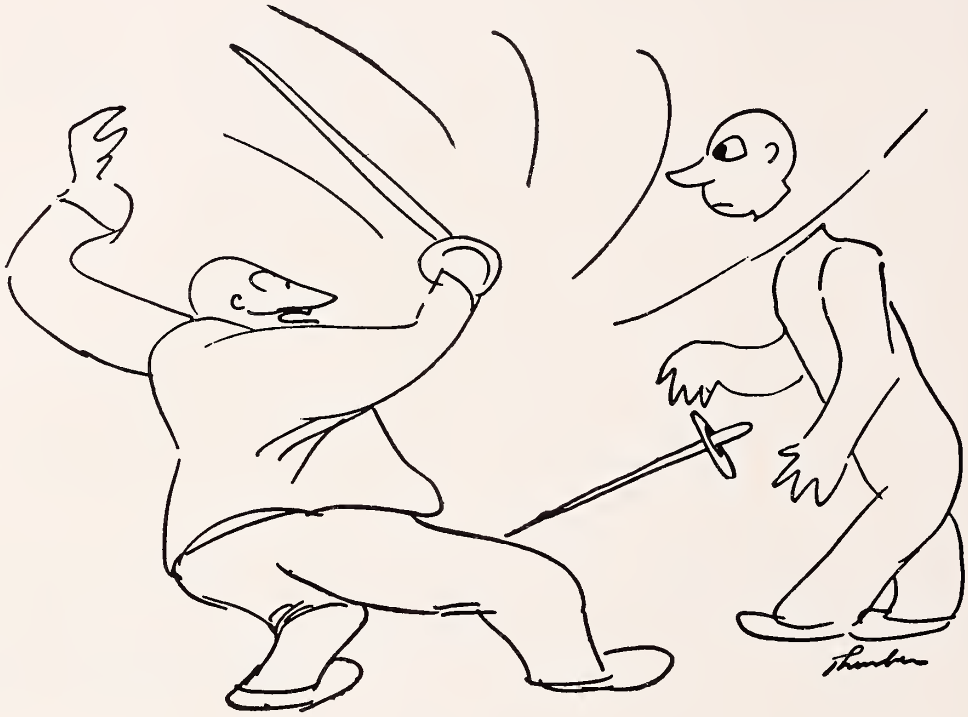

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Letter To A Young Doctor

By Dr. Thomas A. Dooley

Village of Muong Sing
Kingdom of Laos

Dear Bart,

It is far past midnight. I am sitting at the table in my house at Muong Sing, high in the foothills of the Himalayas in northern Laos. The kerosene pressure lamps overhead are hissing at me, and the wind is lashing down my valley. It whips the palm and fragipani. All the earth on this sad cut of the world seems flooded in the monsoon rains. This is the season of the crashing violence of the tropical storm. The crickets, frogs and wilder jungle animals screech and scream. The high Lao night land is not calm.

But I feel very calm in writing to you. I feel as though I have just met you outside of the medical school auditorium. May I thrust my hand out and say, "Congratulations, Bart. Congratulations on your graduation from medical school. Congratulations on being a doctor." But along with my congratulations, I also want to inject into your mind some thoughts to mull over during your coming year of internship.

Four years of medical school are behind you. "What is past is prologue." You have been given much by parents and teachers. Use it wisely, for others. You have worked hard and learned a good deal, but because you are out of the stress of the doing does not mean that you are yet in the peace of the done. You will never be.

As a doctor, you have a tremendous potential. There are a lot of glorious things ahead of you, if you choose to choose them. I know this very well, though only six years ahead of you in time of practice and age of life.

Know that this passing and precarious time in history will demand much of you. It will maroon the hesitant, but inspire the brave. Stand up and shout, "This is my time and my place in this time!" And seek that place. The state of total gratification is for cows, possibly for birds, not for man. Seek greater things than the material.

Do not aim for just a certain socio-economic position in society. Seek something beyond the split-level ranch house and the two-car garage. Become supremely aware of and intimately involved in the great issues of your day. You have the potential for great deeds, and today demands deeds. Human deeds. Principles enunciated and hopes expressed are not enough. Remember this.

You are a doctor. The proud state of being a doctor is a joyful thing. There is a lot more to you than just the knowledge of bugs and drugs. All the information you have acquired has certainly distilled itself into certain beliefs. Your beliefs may be scattered, rough and unclassified, but you do have them. You are well trained. Your hands are keen, your mind incisive, your sensitivity deep, your vision well honed. You are aware of the sadness of mankind. You know the physiognomy of pain, and, accordingly, the quality of mercy. You know the power of drugs and understand the importance of the "patient who has a sickness" rather than the "sickness that is in the patient." You have a capability to know the pain and glory of other men.

You possess more than knowledge of the healing art. You can do more than laboratory experiments and herniorrhaphies. The greatest attribute of you is that indispensable and essential aspect of your human spirit. Learn how to utilize the fiber and core of your heart.

There is a great deal more to living than just existing. Believing is a fine thing, but placing those beliefs into execution is the real test of strength. The state of being a doctor is a happy one, a lofty one, and one filled with tremendous potential for good. You commit a sin of omission if you do not utilize all the power that is in you. Seek a way to practice your art of medicine, utilizing all the deepest powers of your belief. As a doctor, you must be a part of your time. Isolation and indifference in world affairs are completely past and over. You can no longer be just a doctor or just a researcher or just a teacher. All men belong to me. All men have claims on man. And to the man with special talents, this is a special claim. This is your challenge. It is required that man take part in the actions and passions of his time at the peril of being judged not to have lived at all. You are qualified not only to take part in, but perhaps to lead in the actions of a segment of the world today. A doctor's job is to cure sometimes, to relieve often, and to comfort always.

You must utilize, along with your medical talents, the powers of your spirit and heart. This will help to buttress up the fragile peace of the world.

Bart, you've a year's internship ahead of you. And after that, the choice of a residency for specialty training or private practice. I know you have been plagued with some indecision, "Shall I be a specialist with years and years of more training, or shall I go into private practice now?"

I am going to presume that you will choose the life of a general practitioner. There is a place in the world for specialists (speaketh the young G.P.), but this battered, beaten world of ours needs a few more country doctors in even a few more countries and villages, too.

As a general practitioner, where will you practice? There is a need for you every place. But the world is all lopsided in its distribution of doctors. Almost all corners of America have available doctors. With veterans' benefits, Social Security, labor union programs, industrial group health plans, and all the others, there is hardly a citizen who cannot find medical attention if he is willing to make some little effort.

I live in Laos. This valley, prior to our Medico hospital, had nothing but black magic, necromancy, witchcraft, clay images, sorcery and betel juice. The villagers wallowed in monkey's blood, cobwebs, tigers' teeth and incantations. They never had hope, much less help. Today, the people of Muong Sing have good medicine, compassionate help, training and a fine little 25-bed hospital. Twentieth century.

You know the world's statistics. The Congo, 13,000,000 people and not one native doctor. South Viet Nam, 11,000,000 people, about 180 doctors. Cambodia, 5,000,000 people, seven doctors. Laos, 3,000,000 people, one Lao doctor. Other nations' statistics are equally staggering.

Though this is sometimes called "the age of the shrug," I do not believe you would say, as some do, "So what, it's not my problem." You know, Bart, you and I are the heirs of all ages. We have the great legacies of music, art, literature and our own medicine. We have been born and raised in freedom. We have justice, law and equality. But we have overlooked the uglier side of our inheritance. We have also the legacy of hatred, bred by careless men before us. We have the legacy of abuse, degradation, and the inhumanity of men blinded by prejudice, ignorance and personal spleen. To people like you and me, richer in educational opportunities than many, this a special legacy, and a challenge. To accept the ugly as well as the beautiful and to answer this challenge is a privilege and a responsibility. Accept it without fear.

Bart, I personally believe that the unique aspect of this challenge to young doctors demands that we invest some of our lives in the practice of medicine in foreign fields. I say "some," not a lifetime. This is not expected of us. But we can give a year or two. It can be part of the maturation of a man, the metamorphosis of a doctor.

You went through college, medical school, clerkship; internship lies ahead, maybe residency, and then . . . come to the developing nations of the world for a while. Bring your gadgets, and the armamentarium of drugs, to be sure, but most of all bring your human spirit. Bring your youthful enthusiasm, your drive, your energy, your dedication to help the sick. Bring your wonderful spontaneity, your belief in the good and the right. Bring along a sense of humor, don't forget it; you'll certainly need it when the roof leaks, the patients eat all the pills the first dosage, and the witch doctors put cow dung over your sterile compresses. Bring also a few cents' worth of the spirit of adventure that our founding fathers possessed. Spend some time in valleys like Muong Sing. Invest some of your life to answer personally the challenge of today, your legacy, your heritage.

It is more difficult for other professions to enter and work in a foreign country. Citizens and governments are suspicious . . . as they are even a bit suspicious of the doctor. (There are some who are not yet convinced that I am not an agent of the FBI or a Jesuit-in-disguise.) But your M.D. diploma does open many doors. You will be allowed to come to these underdeveloped areas and build your small hospital. You can cure sometimes, relieve often, and comfort always. Splash some of the warmth and goodness of your human spirit on people who heretofore knew little of this element in the Western man. My villagers' lives were just one great groan of agony before the Medico hospital was built. They knew only Western men bent on colonizing them, and perhaps exploiting what little they had.

Your medicine will have a twofold effect. You will find that by just being a doctor with qualities of the human heart, you will help to unify men. Simple humanity makes the primitive lands of Asia and Africa important to every American. Simple self-interest makes it vital.

You are probably thinking, "Tom, hate to sound this way, but what's in it for me? We are all a little selfish, you know." Right you are, Bart. Perhaps we should be a bit wary of the man who is completely unselfish. There is a great deal "in it" for you. By investing a portion of your life for work here, by depositing a year or two of your time you will take back with you into private practice a great sense of accomplishment, coupled with a vast human experience. Your accomplishment will be beyond the narow confines of continent and custom. Your accomplishments will be on a wider scope; along the broad horizons of peace for the whole world. You will always know that you have given a fragment of your life for the good of many.

All men yearn to lose themselves in something greater than themselves. You will have done this, and will have helped to achieve that unquenchable promise that someday all men of all races will learn to live together in peace. I do not believe this fulfillment is achievable in private practice.

You've always been a bit of a cynic. I imagine you are quietly snarling, "Okay, Tom, you've made your point, but to give up a year or two for a spiritual thing called 'fulfillment,' don't know 'bout that."

I can only remind you that the history of mankind constantly repeats the exclamation that the only way man can achieve his own happiness is to strive for the happiness of others. And you reply, "Ugh, Dooley's murky mysticism again." History also proves, Bart, that men rarely learn from the teachings of history, but must learn for themselves. Come to Asia. Learn.

There are programs in the world with which you could work. Programs like the World Health Organization, our own Medico, and others. These will pay you enough to keep you out of debt (though perhaps not much more). They will handle the mechanics of medical procurement and supply. Medico, you know, from a kernel of an idea in 1958, now has 17 hospitals, clinics and programs in 12 different nations. Dozens and dozens of doctors like you. Free next year, Bart?

Today demands a deeper emphasis on the brotherhood of man. All professions must seek ways to do this. For the doctor it is not a difficult thing. It is in the root of the tree of a doctor to understand and believe in brotherhood. This concept was not so important in the times of our fathers. It is now. The Brotherhood of Man exists as definitely as does the Fatherhood of God. And we must not forget it.

I do not believe "brotherhood" is a sentimental, mushy-mouthed hyperglycemic thing. It is a potent, mighty force to bring men together as men. We are not as actively engaged in solidifying this idea as we should be. Doctors know the alikeness of all men. The world does not need another union of white men, or of American men, or of Dutch men, or of Negro men. Or more fragmentation of peoples into endless exclusivisms. Brotherhood should be a force to unite men . . . as men.

Patriotism is not enough, either. Nations must belong to a larger world, with a wider horizon than that of any single country. Countries working together, each giving something to the other . . . this is part of brotherhood. Asia and Africa need picks and shovels, bulldozers and syringes to remove the high cliffs of poverty, injustice and sickness. You as a doctor have those syringes. We must do what we can, as individuals, to help other individuals.

We young Americans must take the drama of our freedoms (from disease as well as from tyranny) that we have received from the past and project it into the future. For other men. We who have it must help those who do not have it.

The kerosene is running out of the lamps and they are sputtering and flickering. Dooley needs to hit the sack, so I'll stop the letter just now . . . and continue it tomorrow.

A full day has passed since I began this letter to you. At clinic this morning we had 78 patients. Everything from a blazing malaria to a man who brought his donkey, requesting that we suture up a laceration in its flank. We gave the malaria patient chloroquine, and sutured the laceration in the donkey's posterior with chromic catgut, size 2 (tough ass).

Some children had diarrheas, eye inflammations, and one had a case of head lice. My American corpsmen pulled some teeth (dentistry is not for me). The kids howled just like they do in America. The old gals complained about having to wait in line, just like they do in America. A few of the older gents wanted some "vigor pills," just like . . . well, anyway. There are no really deep differences between people. I have spent six years of my life among different men, and always I find the similarities outweigh the differences. Each life is infinitely precious as a life. Everywhere.

To recapitulate what I've written, Bart, I believe that as a young doctor, as soon as you finish your internship, you should spend a year or two in lands such as Laos. You should utilize your profession and your heart as a cable to bind men together. Danger cements men; why can't other forces be used? many tools must be implemented to destroy the false walls that separate us. Medicine is one. Medicine when enveloped in that indispensable element of the human spirit. Kindness and gentleness are daily instruments of the doctor, more than of other professions. Kindness and gentleness can be potent weapons to fight against the anger of the world.

The world is made up of persons. Internationality is only a conglomeration of individuals. All individuals yearn for something human. This flings a special challenge to you as there is no more intimate person-to-person relationship than that of the doctor and his patient. Bring the talents of your degree, and the spirituality of your heart, to distant valleys like mine. And take back with you a rich, rich reward.

Dedicate some of your life to others. Your dedication will not be a sacrifice. It will be an exhilarating experience because it is intense effort applied towards a meaningful end.

So along with my congratulations on your graduation I send my wish that you will utilize yourself as a force of unity in the fragile peace of today. And that you will know the happiness that comes of serving others who have nothing.

Sincere best wishes always,
Tom

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Doctor's Office

Everett Bentley Baker, M.D., announces the opening of an office for the practice of general surgery in association with Dr. Robert Seabury at 58 Trumbull Street, New Haven. Dr. Baker, Branford's office, 117 South Main Street, will be continued as usual.

Seymour Byer, M.D., announces the opening of an office for the practice of internal medicine at 70 West Main Street, New Britain.

Robert W. Doering, M.D., announces the removal of his office from 923 East Main Street to 932 East Main Street, Bridgeport.

Karl Friedmann, M.D., announces the opening of an office for the practice of general medicine in association with Dr. Edward W. Allen at Old Boston Post Road, Old Lyme.

Lawrence A. Gardy, M.D., announces the opening of an office for the practice of ear, nose and throat surgery at 449 Farmington Avenue, Hartford.

Marvin L. Hoovis, M.D., announces the removal of his office from 102 Prospect Street to 297 Church Street, Naugatuck.

Michael Jacuch, M.D., announces the opening of an office for the practice of general medicine at 40 Wethersfield Avenue, Hartford.

Saul S. Milles, M.D., announces the opening of an office for the practice of internal medicine and digestive disease at 295 Washington Avenue, Hamden.

Donald McKay, M.D., announces the opening of an office for the practice of general surgery at 58 Broad Street, Middletown.

Louis Olore, M.D., announces the removal of his office from 18 Central Avenue to 14 Central Avenue, Waterbury.

Robert S. Sultar, M.D., announces the opening of an office for the practice of internal medicine at 365 Main Street, Kensington.

Carlos B. Zilveti, M.D., announces the removal of his office from 175 Linden Street to 93 Hopson Avenue, Branford.

Around The State

Naugatuck Valley Medical Society

For many years, the Naugatuck Valley Medical Society has awarded four prizes to seniors graduating from local high schools who demonstrate excellence in the field of science.

Since 1958, each year they have awarded a four year scholarship to a graduating senior who enters the general field of science at the college of his choice. This is financed by the proceeds of the polio immunization clinics.

In May, 1961, they granted financial support to a local high school science club to help it conduct its first annual science fair.

Recognizing the role played by the Naugatuck Valley Medical Society in the encouragement of scientific study in the community, the high school requested that one of the three judges of the exhibits should properly be a representative of the local medical society.

This represents an implementation of one facet of the suggested Connecticut State Medical Society "Local Action Programs" of "The Connecticut Medical Community" as proposed by James G. Burch, Director of Public Relations. None of the previously mentioned projects has been difficult for a small local society to accomplish and the resultant public "group image" has been an improving one.

New London County

The Beta Chapter of Alpha Omega Alpha, the honor medical society of Tufts University School of Medicine, has designated its annual lecture as the Harold A. Bergendahl, Jr. Memorial Lecture in honor of the son of Dr. Harold A. Bergendahl of Norwich, Connecticut.

Dr. Bergendahl's son died following surgery for a congenital heart malformation in 1960 while a medical student at Tufts.

The first lecture was given by Dr. Rene Dubos on "Social Determinants of Health and Disease" on May 17, 1961 at the Tufts University School of Medicine.

New from Saunders

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A New Book! This fresh and unconventional approach to the understanding of respiratory disorders bridges the gap between the technical treatises on Pulmonary Physiology and the purely descriptive textbooks of Respiratory Diseases. It explains the mechanisms by which pathologic processes produce clinical findings. The authors first provide you with a sound understanding of the normal functioning of the respiratory system, and then build on this base an explanation of important types of respiratory disorder, the mechanism of development of each type of disorder, and the way in which such disorders produce symptoms and signs. Throughout the text the various explanations are illustrated by a series of diagrams and line drawings which interpret the authors' ideas with remarkable clarity. You'll find coverage of scores of specific diseases including: Bronchial asthma—Atelectasis—Cysts of the lung—Pulmonary hypertension—Pleural effusion—Herniation of the mediastinum—Manifestations of diaphragmatic disease—Respiratory insufficiency.

By Reuben M. Cherniack, M.D., Assistant Professor of Medicine; and Louis Cherniack, M.D., Assistant Professor of Medicine. Both at the University of Manitoba, Winnipeg, Canada. About 448 pages, 6"x9¼", illustrated. About $11.50. *New—Just Ready!*

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By C. Frederic Fluhmann, B.A., M.D., C.M., Chief in Obstetrics and Gynecology, Presbyterian Medical Center, San Francisco; Clinical Professor of Obstetrics and Gynecology, Stanford University School of Medicine. 556 pages, 5½"x10", with 447 illustrations. About $12.50. *New—Just Ready!*

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By Benjamin Tenney, M.D., Director, Department of Obstetrics and Gynecology, Boston City Hospital; Clinical Professor of Obstetrics, Harvard Medical School; and Brian Little, M.D., Boston Lying-in Hospital; Instructor in Obstetrics, Harvard Medical School. About 500 pages, 6½"x9¾", with 100 illustrations. About $9.00. *New—Ready in September!*

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Name...

Address...

Letter To The Editor

Hartford, Connecticut.
June 9, 1961.

Louis H. Nahum, M.D.
Literary Editor,
Connecticut Medicine,
New Haven, Connecticut.

My dear Doctor:

In the June issue of CONNECTICUT MEDICINE there appeared an editorial by Dr. Marcus Backer of Bridgeport in regard to the presence of syphilis in Europe prior to the discovery of America by Columbus.

My interest is of long standing in the origin of syphilis from a geographic standpoint as an anthropologist. I would like to make the following statement in regard to the matter.

"Each man for his own meat" to be sure, but since when does a scientist seek the confirmation of poets, however likely they may be? Backer may "calm his conscience", tender though it is, because the evidence today is embarassing. There is no doubt about pre-columbian syphilis, as it appeared in the early north, middle and south American Indian populations.

Backer's difficulty with modern communications is evident in his bibliography. For example, Yale Medical Library has long possessed, "The Ruins of Zaculeu, Guatemala", by Woodbury and Trik, 1953, in which the investigation of archaeologic remains of the Amerindian is given in full. Scientific proof, with carbon^{14} dating, stratigraphy and ceramic analyses, aided by modern pathologic techniques, polished bone sections, transparencies and electonmicroscopy, presents evidence for all to read. It is confirmatory evidence; not poetry.

I had the good fortune to uncover the two specimens of cranial bone syphilis described in the report. My interest led me to follow much historical evidence, which is quite clear. To this I have added first hand exploration of museum collections. For example, the Peabody Museum in New Haven, near Backer's town of Bridgeport, contains the osseous collection of Hiram Brigham from Macchu Picchu. Several excellent specimens of bone syphilis are included. The Peabody at Cambridge and a number of other excellent museum collections were examined. They all have examples of bone syphilis. Recently I have examined a large osseous collection in Mexico City, where there are no less than thirty examples of the rare cranial bone syphilis, dating prior to contact with Europeans by over 1000 years.

Many more examples are appearing each year in the archeologists collections of burials of the "old indians" of the new world. So, let us not "give it back to the Indians". They always had it.

CHARLES W. GOFF, M.D.

In reply to Dr. Goff's comments, Dr. Backer makes the following statement:

"Archeological clues to syphilis among Amerindians have no bearing on the merit of records placing the disease in Europe before 1492."

MARCUS BACKER, M.D.
Bridgeport, Connecticut.

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Book Reviews

EVALUATION OF THE PELVIS IN OBSTETRICS by Charles M. Steer, M.D. Second Edition, W. B. Saunders Co., Philadelphia, Pa. 1959, 131 pp. $4.00.

REVIEWED BY CARL E. JOHNSON

In 1951 Dr. Howard C. Taylor Jr., "Cephalopelvic disproportion is the chief cause of difficult labor, and difficult labor is still the most important problem in obstetrics." As the writer so aptly states "this book is not designed to replace standard text books of obstetrics." The obstetric forceps and their uses; breach delivery; and other features of obstetrics are best studied in a large text. Continuing he says, "this book is designed to prepare the operator so that the proper method of delivery may be chosen in the individual case." The author mentions some of the limitations and inaccuracies of this method, but not the possible remote dangers of too frequent and diligent application of X-rays to the mother and unborn child. It is however an important aid in helping to understand how to manage obstructed labor. This book emphases that one of the permanent values of Malloys original investigation of pelvic classifications. The terminology suggested by Caldwell and Malloy is in world wide use, and is thoroughly described in this small volume.

CLINICAL PHYSIOLOGY by Arthur Grollman, M.D. Blakiston Division McGraw-Hill Book Co., New York, New York, 1957, 811 pp. $10.00.

REVIEWED BY LOUIS H. NAHUM

The purpose of this book is to show the experimental basis of medicine. There is therefore found in it the physiologic principles in the broad sense, incorporating material from biochemical, pathologic pharmacologic and even bacteriological sciences. It is aimed at the senior medical student, the intern and the practitioner.

The progress of cilincal medicine has been extremely rapid and the emphasis in this book is on those areas of medical science which have a practical application in the daily practice of medicine. The metabolic, cardiovascular and endocrine fields have received the preponderant attention, while other areas not rapidly expanding are not so completely covered since recent text books can be referred to just as well.

Throughout the book, medical education is uppermost in the mind of the editor who has sought for and succeeded in establishing the correlation of the basic disciplines upon which clinical medicine now rests. But in such a broad field as today, one naturally needs multiple authorship and the editor is to be congratulated upon the stellar talent which he has marshalled in this book. Most of the twenty-six contributors rank amongst the truly great in our present medical world in America.

The book is divided into nine parts, Part I made up of seven chapters is devoted to general metabolic considerations. The authors are: J. P. Peters, W. B. Bean, D. Seldin and the Editor. Part II the Cardiovascular System consists of six chapters with R. P. Grant, R. J. Bing, C. P. Chapman, M. I. Ferrer, Rejane M. Harvey and the Editor. Part III is devoted to the respiratory system by A. Cournand and D. W. Richards. Part IV deals with the digestive system with Allhausen, Carbone Uyeyama and Sborow. Part V covers the hematopoietic system by the Editor and also L. M. Tocantins. Part VI is devoted to the Endocrine System, chapters by the Editor, F. L. Engel, L. G. Welt, P. Starr, J. E. Harvard and J. W. Conn and S. F. Fajans, Part VII is on the renal excretory system by C. H. Burnett. Part VIII on the Locomotor system by David Grob and also the Editor. The last section is on Infection and Immunity by A. I. Braude.

Any book which is devoted to medical progress must have general principles and practical application. General principles do not change very rapidly, but expanding knowledge alters concepts, and changes practice. For this reason any book is bound to come out of date within four to five years and this is why textbooks are so frequently rewritten. This book was written in 1955-1956 published in 1957 so that the latest references are those of 1955. Six years is a long time in an expanding field and makes many changes. This book is no exception to this rule. But the work in it is solid. The authors, leaders in their field have kept their eye constantly on medical education and it is a fine reference book as of 1955.

CLINICAL RADIOLOGY OF ABDOMINAL DISORDERS by Bernard S. Epstein, M.D., Lea & Febiger, Philadelphia, Pa., 1958, 327 pp. $15.00.

REVIEWED BY SIDNEY L. CRAMER

From the title, "Clinical Radiology of Acute Abdominal Conditions," one would be led to believe that the scope of the book was limited. The author, however, had defined the term, "acute abdominal conditions," as not necessarily the dramatic or catastrophic, but those that needed prompt or immediate attention. Within this definition, therefore, he was able to include a discussion of the majority of abdominal conditions encountered in daily practice.

The description of each entity followed a particular format. Several paragraphs or even pages were devoted to each disorder in which were included pertinent clinical findings, the experience of others, and the impressions of the author. For the most part, radiographs were included on the same page, each accompanied by an explanatory legend below. Whereas in other texts, the bibliography appears at the end of the chapter or the book itself, in this monograph, it is placed directly at the end of the subject under discussion. Each bibliography was a joy because it contained the best articles on the subject which have appeared in the literature in the past ten years. It represented a prodigious amount of careful reading by the author.

Two statements raised a question in this reader's mind. One made mention that diverticula of the stomach arose at or below the mouth of the esophagus; and the second, that carcinoma of the duodenum was not infrequent in the bulb.

Because there is no discussion of radiologic techniques and methods, the book is not for students. Rather it is an excellent reference for the experienced radiologist or gastro-enterologist who wants a concise review of everyday problems and to bring himself up-to-date on the newer syndromes being discussed today.

CIBA FOUNDATION SYMPOSIUM ON THE BIOSYNTHESIS OF TERPENES AND STEROLS, G. E. W. Wolstenholme and M. O'Connor, Editors. Little, Brown and Company, Boston, 1959, 311 pages, $8.75.

REVIEWED BY SOFIA SIMMONDS

This volume contains the complete proceedings, both formal papers and informal discussions, of a symposium held in May, 1958, under the auspices of the Ciba Foundation. The participants included leading investigators—organic and biochemists—from the U.S., Great Britain, Germany, Sweden, and Switzerland who have been actively engaged in the study of biologically important sterols and terpenes.

Because cholesterol biosynthesis in mammals has been investigated intensively for over fifteen years, it is not surprising that a large part of the symposium is devoted to this subject. There is, however, special emphasis on two aspects of current interest: the roles of mevalonic acid (and related branched-chain compounds of five or six carbon atoms) and of squalene as intermediates in the biosynthetic pathways leading from acetate to cholesterol. This section is followed by a consideration of the formation and metabolism of the major products of cholesterol metabolism, the bile acids. Here, attention is directed not only to bile acids in mammals but also to those in fishes, amphibia, reptiles, and birds.

Sterol and terpene synthesis in the plant world likewise is discussed in papers on yeast (whose ergosterol is the precursor of Vitamin D_2) and other microorganisms and higher plants (whose carotenoids may serve as precursors of Vitamin A). The study of the biosynthesis of terpenoid compounds in higher plants, fungi, molds, and bacteria is a relatively new field and a rapidly expanding one. The several papers devoted to this field are especially helpful as a review for those whose main interest lies in mammalian biochemistry. It is to be hoped that the plant biochemists and microbiologists who consult this volume will find the sections on animal metabolism of equal interest and help as a review of the vast amount of information now available concerning sterol metabolism in animals.

The standard of the papers is extremely high throughout and, it is important to note, there are experimental papers in which the methods used and the data obtained are described in sufficient detail to permit the reader to form his own judgment concerning the validity of the conclusions presented by the authors. Indeed, much of the experimental work described at the symposium had not yet been published in scientific journals. Consequently, the discussions following each formal presentation take on added interest.

Like all reports of Ciba Symposia, this volume is the product of careful editing and fine printing and it has an excellent index. It doubtless will be essential reading for all concerned with this field of sterol and terpene metabolism: —the expert will wish to study it carefully; the novice should find it a stimulating introduction to a complex subject.

ARTHUR E. HERTZLER — THE KANSAS HORSE-AND-BUGGY DOCTOR by Edward H. Hashinger. Published by University of Kansas Press, 1961, 37 pp. $2.00.

REVIEWED BY DENIS S. O'CONNOR

This ninth series of the Logan Clendening Lectures on the History and Philosophy of Medicine in its thirty-seven pages brings to life a man, a doctor and a scientist. His religion was integrity, his philosophy was work and his interests were unbounded.

This lecture epitomizes what Dr. Hertzler was and what all doctors should be. So burdened is the student and doctor today with science that the doctor does not show through. Unquestionably, that is one reason that the doctor of today has fallen from his former high estate. Perhaps the history and philosophy of medicine would do much to restore the prestige of medicine.

Forced Retirement Seen Declining

Compulsory retirement of employees at age 65 is on the decline, according to the current Journal of the American Medical Association.

"In recent years some companies, as well as the public, seem to favor a more liberal retirement policy," a Journal editorial said. "One reason for the change in public opinion is that more employees are in good health at 65 today than a generation ago and continue to use their experience and skill to the benefit of their empoyers as well as to themselves.

"The American Medical Association Committee on Aging asked labor and industry to re-evaluate their support of arbitrary retirement systems, and a sizeable number of firms did liberalize their retirement programs."

The editorial quoted a statement by former A.M.A. President Louis Orr, Orlando, Florida, which said:

"There is no scientific rhyme or reason for selecting 65 as the magic number separating the productive from the non-productive, the healthy from the unhealthy. Physicians have no convenient rule of thumb definition for old age.

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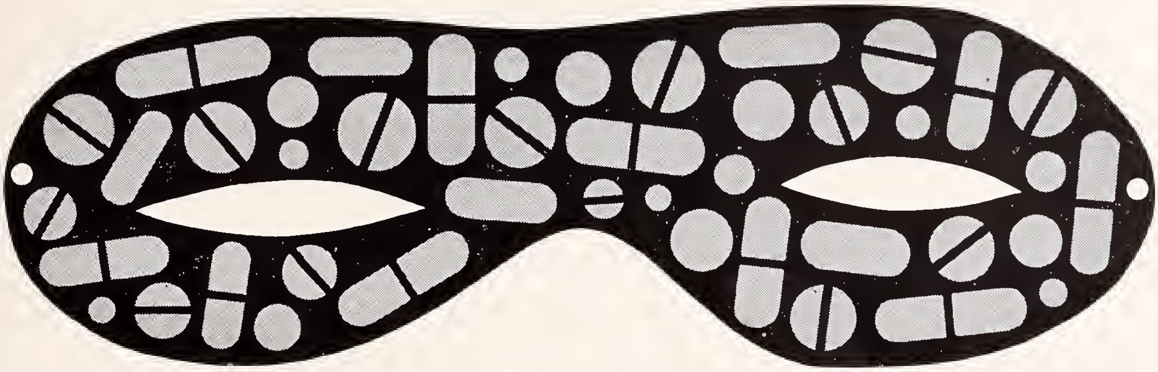

drugs anonymous

One of the several hastily conceived and potentially dangerous suggestions for reducing drug costs is generic-name prescribing. The proponents of generic-name prescribing claim that it will lower drug costs significantly and—through supervision by the Federal Government—provide quality equivalent to that of trademarked drugs. We maintain that these claims are false. Here are some authoritative answers to the principal questions posed by generic-name prescribing.

How much money would be saved if all prescriptions were written for generic-name drugs?

"The [Rhode Island] Division of Public Assistance examined 10,000 drug prescriptions for welfare recipients for the purpose of determining the actual savings . . . of generic versus trade-name drugs. The drugs had cost $28,000. Substituting generic drugs whenever possible would have provided a saving of less than 5 per cent. Syracuse has made a similar study of drug costs with comparable results."

Rhode Island Medical Journal,
January, 1961

Are the savings worth the risk of sacrificing quality?

". . . it is unsafe [to prescribe generically] because there is not sufficient policing of our standards. . . ."

Lloyd C. Miller, Ph. D.
Director of Revision of the U.S.P.

"The naive belief that, if a product was not good, the FDA would prohibit its sale is just not realistic. . . . it is completely impossible for the FDA to check every batch of every product of every manufacturer. . . . Hence the integrity and reputation of the manufacturer assume unusual significance where drugs and health products are concerned."

Albert H. Holland, M.D.
formerly Medical Director of the
Food and Drug Administration

Smith Kline & French Laboratories, Philadelphia SK&F

Clinical Pathological Conference

NORWALK HOSPITAL
NORWALK

Conducted by ROY N. BARNETT, M.D.

APRIL 21, 1961

Guest Clinical Discussor, FRANKLIN STREITFELD, M.D.
Guest Neuropathologist, ELIAS MANUELIDIS, M.D.

This white female was 55 years old when first admitted to the Norwalk Hospital on 1-6-41 because of slight vaginal bleeding of three days' duration. There was no associated pain. LMP three and a half years ago. Blood pressure 110/70. Physical examination showed normal findings. Laboratory examinations were within normal limits. A biopsy of the cervix and D and C were done the day after admission. There was no pathological report on the curettings but the biopsy of the cervix showed chronic cervicitis. She was discharged symptom free 1-10-41.

She was seen by her family physician in September 1958 because of a recent episode of disorientation, inability to eat, confusion in dressing and positive Romberg sign, occurring while she was in South Carolina. There were no significant physical findings and no diagnosis could be made. It was noted that for some time she had had a change of personality with childishness, forgetfulness and dizziness.

In November 1958 she was treated with multivitamins (niacin and riboflavin), liver extract and B^{12} injections because of beefy red tongue, perleche and cyanosis of the lips. Her hemoglobin was 12 grams, RBC 4.81.

In July 1959 while on vacation in New Hampshire she suddenly developed partial paralysis of all extremities, aphonia, urinary incontinence and dizziness. She gave inadequate answers to questions. Her memory was poor. There was no unconsciousness. She was admitted to Norwalk Hospital 7-10-59 by ambulance.

On examination she was weak, pale, and disoriented. Blood pressure 130/70, pulse 68, temperature 98.6° and respirations 20. Tongue was red and smooth. Lungs were slightly hyperresonant. There was a systolic murmur at the apex. Heart sounds were of poor quality. Liver, spleen and kidneys were not palpable. The left hand grip was weak. The deep tendon reflexes were hyperactive and symmetrical. Babinski was positive on both sides.

Laboratory Examinations

Hemoglobin 14.7 gms (93%), WBC 11,010, RBC 4.02, polys 50, stabs 3, lymphs 43, monocytes 2, eosinophils 1, juveniles 1. BUN 14 mg%, NPN 33 mg%, sugar 81 mg% VDRL negative.

Urinalysis showed 1+ albumin, 30-50 RBC and 1-3 WBC/HPF. Second urinalysis for blood showed 15-20 RBC and a third examination 0-2 RBC/HPF.

Course

During her hospital stay she was essentially asymptomatic, save for occasional vomiting. Due to urinary incontinence a Foley catheter was inserted for five days. Vital signs were stable. She was given chloromycetin and I.V. fluids. She was discharged well 7-18-59.

On May 30, 1960, while in Pennsylvania she was taken to Lancaster Hospital for unconsciousness and inability to swallow. She stayed there for three days receiving I.V. fluids. She was transferred by ambulance and admitted to Norwalk Hospital 6-3-60 unconscious. She had been unable to speak, eat or drink until today when she spoke a few words. At first she did not move either arm but did move her legs. She started moving both arms about two days before this admission.

On physical examination, she was unconscious and in poor general condition. Blood pressure 130/70, pulse 98, respirations 20. EENT-negative save for slight cyanosis of the lips. Heart sounds were distant and no murmurs were heard. Lungs were clear. Liver and spleen were not palpable. There was a positive Babinski on the right side.

Laboratory Examinations

6-3-60.

Hemoglobin 14.4 gms (91%), RBC 4.56, WBC 5,450, polys 51, stabs 3, lymphocytes 46. VDRL weakly positive. BUN 14 mg/100 ml, NPN 28, CO_2 19 mEq/L, chlorides 97 mEq/L, sodium 124 mEq/L, potassium 3.6 mEq/L.

Urinalysis showed 5-6 WBC/HPF and a repeat showed +albumin, 1-4 RBC/HPF and 20-25 WBC/HPF.

Course

In the hospital she gradually regained alertness, became progressively better oriented. Foley catheter was necessary because of urinary incontinence and was left in place for five days. She was also given I.V. fluids, composed of 5% glucose in water. She was discharged much improved 6-9-60.

In August 15, 1960, she had again an episode of drowsiness, incoherence, positive bilateral Babinski, weak grasp especially the left, inability to differentiate pin-prick from blunt prick in both legs and left arm. She knew her name and address. Her answer to any other question was "nothing". The next day she was worse and so was admitted to the hospital. Further questioning revealed that she had been taking liquid nourishment and had voided several times involuntarily. The morning of the day of admission, she was semi-comatose and unresponsive. She had no headache, dizziness, pains, nausea or vomiting.

On physical examination, she was semi-comatose, well developed and well nourished. Blood pressure 140/80, temperature 99.6°F. EENT-neck and lungs were negative. The PMI was at the fifth interspace 1.5 cm outside LMCL. There were no thrills nor murmurs. The liver, spleen and kidneys were not palpable. Bilateral Babinski and increased knee jerks were present. She could only feel pin-prick in the right arm.

Laboratory Examinations were: 8-16-60. Hemoglobin 15.4 (97%), WBC 6,304, Polys 49, Stabs 7, lymphocytes 32, atypical lymphs 2, monocytes 4, eosinophils 3, basophils 2, juveniles 1, VDRL negative. BUN 15 mg/100 ml, NPN 33 mg/100 ml, sugar 93 mg/100 ml, CO_2 14 mEq/L, chlorides 102 mEq/L, sodium 132 mEq/L, potassium 4.4 mEq/L. Urinalysis revealed numerous WBC and E. Coli on culture. Stool for ova and parasites was negative.

X-ray Studies

Chest—Moderate increase in transverse cardiac diameter. Aorta is broad and tortuous. Bronchovascular markings and hilar shadows are prominent.

Barium Enema—Renal and psoas shadows are not well defined. Liver and spleen are not enlarged. Barium enema shows no intrinsic organic disease of the colon.

G.I. Series—No intrinsic organic disease of the upper gastro-intestinal tract or proximal small intestine. Multiple radiolucent defects throughout the lower portions of the esophagus are characteristic of varices.

Course

On admission she was given glucose in saline and glucose in water by I.V. The day after admission she was fairly alert and ate fairly well. She was still somewhat lethargic and occasionally restless. The fourth hospital day, she was much improved and knee jerks were back to normal. Babinski was only slightly positive on the left and she felt pinpricks in all limbs. She was complaining of abdominal distention. The last three days in the hospital she was alert and asymptomatic. CO_2 on 8-23 was 16 mEq/L. She was discharged 8-24-60. The second hospital day her temperature was 102°F but it was normal thereafter.

She was admitted the fifth time on 10-28-60 in coma. She went to bed the night prior to admission feeling very tired and in the morning could not be aroused. On admission, she was unconscious, dyspneic and cyanotic. Blood pressure 170/100, temperature 97.6°, PR 76. EENT-pupils were sluggish to light. Heart and lungs were within normal limits. The abdomen was distended. Bilateral Babinski and 3+ knee jerks were present.

Laboratory Examinations

10-28-60: Hemoglobin 15.3 gms (96%), WBC 7,390, polys 64, lymphocytes 36. VDRL negative. CO_2 15 mEq/L and a repeat examination 11-2-60 19, chlorides 110 mEq/L, sodium 142 mEq/L, potassium 4.6 mEq/L.

Urinalysis showed 0.72 mg% barbiturate and no porphobilinogen. 11-2-60 — Cerebro-spinal fluid — cell count 1 WBC, 2 RBC, Pandy negative, total proteins 56 mg%, sugar 83 mg%, chlorides 111 mEq/L.

Course

She was given I.V. and oral fluids. She was placed in oxygen tent and given aminophyllin for cyanosis and dyspnea. Foley catheter was inserted because of urinary incontinence. Following this, she gradually regained alertness and became more responsive and rational. Lumbar puncture was done on the fifth hospital day. Initial pressure was 360 mm H_2O (sitting position). The CSF was crystal clear. The Babinski reflexes and knee jerks became less and less pronounced. Her clinical condition improved. She was discharged 11-6-60. She was afebrile throughout.

On December 10, 1960 she had an episode of drowsiness but recovered completely the following day.

Her sixth admission was 12-28-60 for coma. On admission she was slightly restless, moved both legs freely and the left arm was held in rigid flexion. Blood pressure 150/90, temperature 98.4°F. Pupils were constricted. Heart, lungs and abdomen were negative. Increased knee jerks and bilateral Babinski reflexes were present.

Laboratory Examinations:

Date	12-28-60	1-4-61	1-12-61
Hemoglobin	12.5 (79%)		16 gm (101%)
WBC	7,720		19,670
Polys	60		23
Stabs	6		54
Lymphocytes	34		21
Monocytes			1
Juveniles			1
VDRL	Negative		
CO_2	18 mEq/L	18	14
Chlorides	109	102	110
Sodium	143	130	142
Potassium	4.4	4.4	5.7

Urinalysis — 1+ albumin and 40-50 WBC/HPF on one occasion.

Course

She was given I.V. fluids. Oxygen was administered for cyanosis and dyspnea. Tube feedings containing 125.9 gm carbohydrate, 79.5 gm protein and 50.7 gm fat daily throughout her stay, were instituted on account of coma. Foley catheter was inserted for urinary incontinence. Her clinical condition remained unchanged. The knee jerks and Babinski reflexes as well as occasional generalized body rigidity persisted, coma deepened. The fourteenth hospital day rhonchi were heard in both lung fields. Respirations became moist. Suctioning was administered productive of some blood tinged material at times. She started to develop blisters in the buttocks the seventh hospital day and these eventually broke down. The sixteenth hospital day, respirations were noticed to be labored. Coma and hyperactive reflexes were persistent. The following day (17th hospital day), respirations were moist as well as very labored. Color was poor. Rhonchi were present in both lung fields. Her temperature rose to 100.8°F the seventh, eighth and eleventh hospital day. The last day of life she had a temperature of 100.2°F. She died at 8:30 P.M., 1-13-61.

Discussion

Dr. F. H. Streitfeld:

This woman had a puzzling two-year illness prior to her death at the age of 74. This was characterized by intermittent symptoms and signs of neurological disease. The episodes apparently developed abruptly and improved quickly with simple supportive care. They became progressively more severe but there was no definite evidence of any residual problem in the intervals between attacks.

With these episodes she would have disturbance of consciousness, often coma, weakness and spasm of both upper and lower extremities, sensory disturbances, hyperactive tendon reflexes and Babinskis, and disturbed function of the pharynx and larynx.

The neurological picture suggested bilateral pyramidal tract involvement and some form of pseudobulbar palsy. At the same time there was evidence of hypoxia and a lowered CO_2. There was no consistently apparent cause for these episodes of central nervous system dysfunction. No cardiac arrhythmia was ever noted.

The intermittency and duration of the disease excluded the likelihood of a neoplasm or an inflammatory condition of the central nervous system. There was little evidence for nutritional disease except for a glossitis which was mentioned once. Pernicious anemia was not present. The nature of her illness was suggestive of some sort of metabolic disorder. Blood sugars were always within the normal range. Porphobilinogen was sought but not found. Her CO_2 disturbance may have been related to hypoxia. There was no history or direct evidence of liver disease except for the presence on x-ray of esophageal varices. Blood ammonia and hepatic function studies were not performed and the liver and spleen were not palpable. There was no jaundice. An occult portal cirrhosis deserves consideration but the neurological picture would be bizarre and atypical. A tremor was not described at any time. However, her terminal admission was associated with tube feedings containing a very high concentration of protein, and her deterioration under such circumstances may be significant with respect to possible liver disease. Demyelinating or degenerative diseases of the central nervous system would not have been likely to cause such a strange clinical picture. Anatomic localization to the brain stem and medulla were suggested by the combination of coma, bilateral pyramidal signs and the pseudobulbar manifestations.

Because of the patient's age and the intermittent nature of her disorder, cerebral arteriosclerosis with basilar artery insufficiency is suggested as the best explanation for her illness.

Dr. J. Falsone:

I notice that the hemoglobin rose from 12 to 16 grams in two weeks. Whereas this may be related to hydration, it also suggests possible anoxia. Alveolo-capillary block and cerebral anoxia may be present.

Dr. E. Mulford:

I am in general agreement with the discussant. However, I would like to suggest the following possible differential diagnoses:

1. Subdural hematoma.
2. Degenerative disease, such as amyotrophic lateral sclerosis.
3. Metastatic malignancy.
4. Phenobarbital addiction.

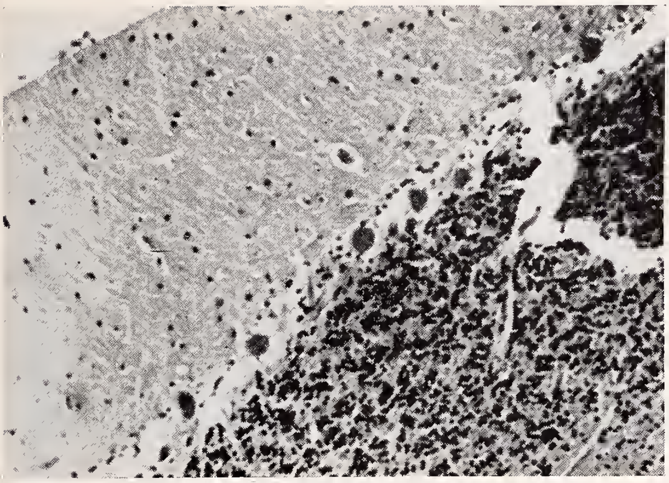

Figure I
Low power view of normal cerebellum. Small dark granular cells below, large Purkinje cells in center, acellular molecular layer above. X290.

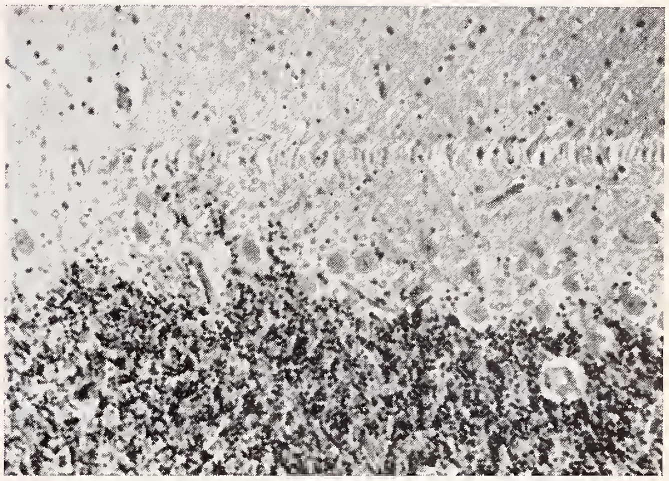

Figure II
Low power view of cerebellum in present case. Granular, Purkinje and molecular layers as in Fig. I. Note many pale astrocytic nuclei around and above Purkinje cells. X290.

Dr. J. Levine:

Another possibility is pancreatic adenoma with hypoglycemic episodes. I would also consider lupus erythematosus.

Dr. M. Goehausen:

I should like to go out on a limb and suggest that this patient had recurrent episodes of hepatic coma. One thing that cannot be ignored is the radiological demonstration of esophageal varices. It is also interesting to note that she recovered from all of her comas when she was given only I.V. glucose and saline; but that on her final admission she succumbed to high protein tube feedings which aggravated her hepatic coma.

Dr. Roy Barnett:

The main lesion is a markedly shrunken 660 gram coarsely nodular liver. This is a classic postnecrotic cirrhosis showing broad bands of connective tissue. (Fig. 4) There are groups of 3 or more portal triads forming one of Steiner's criteria for postnecrotic lesions. The liver cells are generally well preserved, explaining the lack of jaundice; probably liver function tests would have been normal had they been performed.

Related findings are esophageal varices and "fibroadenie" of the spleen. This appearance in which the sinusoidal epithelium is tall, producing a pseudoglandular appearance and in which the cords of Billroth are fibrotic and infiltrated with plasma cells, is characteristic of cirrhosis; it is due to inflammation as well as to portal hypertension. There is a terminal focal pneumonia of the lower lobes of both lungs.

The striking organic findings in the brain will be

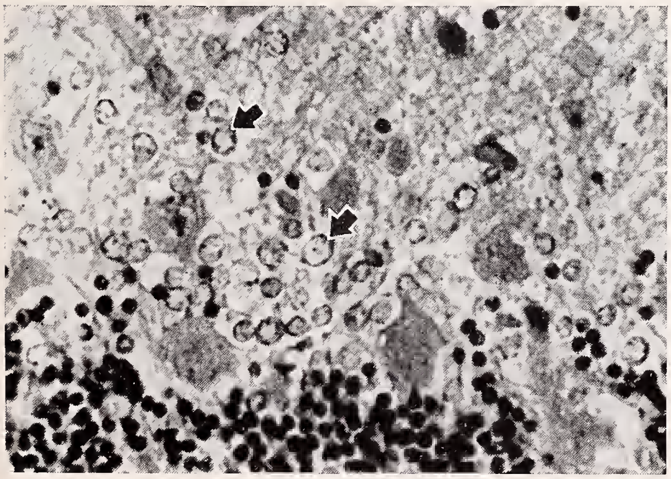

Figure III
High power view of cerebellum at level of Purkinje cells. All the vesicular nuclei (see arrows) are large pale astrocytes which have multiplied remarkably. X1140.

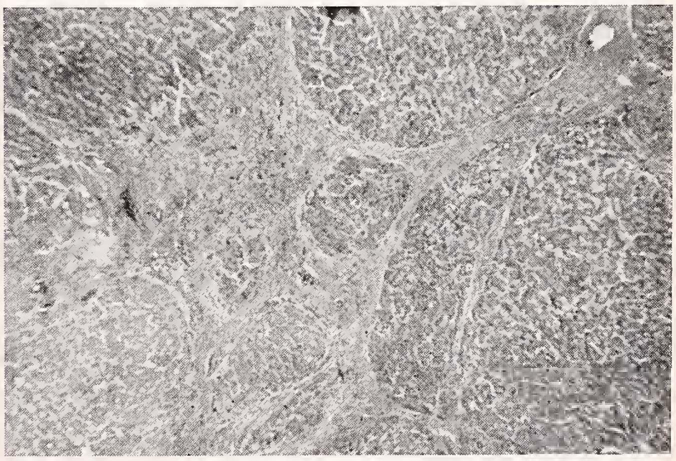

Figure IV
Liver, scanning power. Broad scars containing numerous portal triads separate bands of rather well-preserved liver cells. X100.

discussed by Dr. Elias Manuelidis, Neuropathologist of the Yale University School of Medicine.

Dr. Manuelidis:

Normal astrocytes are relatively small dark cells (Fig 1). In the present case there is a marked increase in astrocytes in the pons and cerebellum particularly. (Fig. 2, 3) They are large, pale and swollen with no evidence of cytoplasm, the so-called naked astrocytes.

Occasionally there is a condensation of the chromatin in the nucleus producing a structure similar to a nucleolus.

In cirrhosis of the liver there is marked increase of astrocytes, Type I or Alzheimer's cells are characterized by maximal enlargment with cytoplasmic traces and condensation of chormatin, closely resembling ganglion cells. Type II or the naked astrocytes are swollen with no evidence of cytoplasm. These proliferative changes occur in other conditions like Wilson's pseudosclerosis and in those dying of internal hemorrhages.

There is no correlation of ammonium levels with the astrocytic proliferation. However experimental studies on rats which were given infusions of ammonium acetate showed astrocytic swelling which was related to the increase in ammonia levels. Increase in ammonia has something to do with hepatic coma, but there are other factors which contribute, such as high protein diets, tranquillizers and barbiturates.

In uremia and certain other conditions there is astrocytic swelling, but of a different distribution.

As regards the clinical impression of cerebral ischemia as the main disease, this would be unlikely in view of the complete recovery between episodes.

Question:

Were there any foci of demyelinization associated with the hepatic coma and cirrhosis

Dr. Manuelidis: No.

Dr. Flores:

Microscopically what are the differences between the changes in uremia and hepatic coma?

Dr. Manuelidis:

In uremia the astrocytic changes predominate in the pons and cerebellum. They are particularly perivascular in location (glial nodules). Also in uremia there is perivascular bleeding and foci of demyelinization not seen in hepatic cirrhosis.

Dr. K.G.S. Nair:

In this connection, it is interesting to note the role that gamma-amino butyric acid plays in certain aspects of brain function. It is known that in Vitamin B_6 deficiency states, there is a demonstrable change in the levels of G.A.B.A. in the brain. This in return is responsible for convulsions and other neuromuscular irritability that occur in B_6 deficiency. We do know that B_6 deficiency occurs in alcoholics and in cirrhosis of liver and I wonder whether any of the C.N.S. symptoms that were described in this patient are as a result of this sort of disturbed metabolism.

Dr. M. Weinberg:

Is there any correlation with the blood pH?

Dr. Barnett:

Toxicity of ammonia varies with the pH changes, the more acid the more toxic.

Dr. Chernow:

Are these astrocytic changes reversible?

Dr. Manuelidis:

In rat experiments when the infusion of ammonia was stopped there was prompt symptomatic recovery. However the microscopic studies were not pursued in recovered animals.

Summary

An elderly woman suffered repeated episodes of weakness, paralysis and unconsciousness from each of which she recovered completely. In the last episode treatment was changed from parenteral glucose solution to high protein tube feeding; she worsened and died. Marked metabolic encephalopathy found at autopsy is presumed to be the evidence that her symptoms were due to shunting of ammonia and other enteric derived toxins around her shrunken, cirrhotic liver.

OBITUARIES

Rudolph J. Anderson
1879 - 1961

Rudolph J. Anderson died suddenly on April 6, 1961, at the age of eighty-one. His life was one full of hard work and accomplishment. His character, mellowed by the experiences of time and cultured by the associations and devotion to intellectual pursuits in the field of biological chemistry, gave him a quiet dignity and kindness which endeared him to his many associates and friends.

Born on September 13, 1879, in Harna, Sweden, on a farm, he emigrated to America at the age of fourteen. He worked in Cambridge, Massachusetts, and attended the Harvard Grammar School for three years, graduating in 1897. His first contact in chemistry was as a laboratory helper in industry. He followed pharmaceutical employment and in 1903 received a degree from the New Orleans College of Pharmacy. Stirred by further interests, he entered Tulane in 1904 and received a B.Sc. in 1906. He then began a career of continued growth and achievement. He did graduate work at Tulane in 1907, studied at Uppsala, Sweden, in 1909-1910; Berlin, Germany, 1910-1911 and 1914; University College, London, in 1914-1915; and received his Ph.D. from Cornell in 1919. He later received an honorary M.D. from the University of Lund, Sweden.

During World War I, he served as a Captain in the Sanitary Corps, U.S. Army, 1917-1919. Subsequently, he became a Major, Sanitary Corps, U.S. Army Reserve.

From 1919 to 1926, he was Chief of Research, Biochemistry, Geneva, New York, and Professor of Biochemistry, Cornell University in 1919-1926.

In 1920, he married Clara Tillinghast, a charming and gracious lady, interested and sympathetic in the fulfillment of his academic and social interests. Their life was one of mutual devotion.

From 1927 to 1948, until retirement, he was Professor of Organic Chemistry at Yale University. From 1937 until 1958, he was Managing Editor of the Journal of Biological Chemistry. He was a member of the Board of Scientific Advisors of the Jane Coffin Childs Foundation for Medical Research 1937-1952.

Professor Anderson was an honorary member of the American Trudeau Society, the Harvey Society (New York) and the Connecticut State Medical Society. He was awarded the Trudeau Medal. He was a member of the American Chemical Society, the American Society of Biological Chemists and was Vice-President and President in 1941-1942. He was also a member of the New York Academy of Science, the Connecticut Academy of Science, the National Academy of Sciences, the Society for Experimental Biology and Medicine, and the American Association for the Advancement of Science.

Professor Anderson published about 175 papers which included investigations of phosphorus compounds of plants, anthocyan pigments of American grapes, sterols of plant origin; also on the chemical composition of the lipids of the human, bovine, and avian tubercle bacillus, the timothy grass bacillus, and the leprosy bacillus, *Phytomonas tumefaciens* and *Cysticercus fasciolaris*.

He enjoyed a happy social life and belonged to the New Haven Lawn Club, the Graduates Club, the Yale Faculty Club and the Madison Golf Club where he loved to play with his friends. He was a Fellow at Calhoun College and enjoyed his associations with the students and other Fellows.

His early life was a struggle, but his strength of character and rugged individualism carried him through to rich accomplishment and to the pinnacle of success in his chosen field of endeavor. To those today who want so much for so little, it is an inspiration to study what can be accomplished by hard work and honest effort. Not unlike the life of Lincoln, he was conceived in a humble environment and experienced many problems and difficulties. As a result of his intellectual achievements, his moral strength and courage, and his depth of character, his life was crowned with glory.

Frederick W. Roberts, m.d.

James Murphy, M.D.

1873 - 1961

On June 23, 1961 Middletown saw the passing of one of its gentleman-physicians. Dr. James Murphy, son of Mr. and Mrs. James Murphy was born in Middletown, Connecticut on August 13, 1873. He attended Middletown High School and pitched for Wesleyan University's baseball team. He obtained his doctorate in medicine from the University of Pennsylvania in 1895 and settled his office in the town of his birth.

When the Middlesex Hospital opened an X-ray Department he was its first Roentgenologist serving from 1913 to 1938 when he retired at 68 from the active staff. He continued his specialty in his own office where he also practiced medicine until ill health a few years ago forced him to retire.

A prolific reader of the old school, he was also well read in current literature, both fiction and history. His interest in the latter was so extensive that he prepared a manuscript on Civil War Generals of West Point, but when about completed, a book covering the same subject was published and he gave up his plans.

He was a student of Gilbert and Sullivan and could recite or sing arias from almost any one of them and would, often, to illustrate a point. He was quite a reconteur and a brilliant humorist, never lacking for an appropriate story to illustrate a subject.

Dr. Murphy was very active in medical circles having been elected to all important offices in the Middlesex Hospital, the Central Medical Society and Middlesex County Associations. He was president of the Middletown Board of Health from its inception, an active member of the Y.M.C.A., the District Nurse Association, the Middlesex Historical Society, the Boy Scouts of America Council, and was chairman of the first Middlesex Hospital Drive for $50,000.

EUM SEMPER REMINISSE JUVABIT

Harry S. Frank, M.D.

George D. Burns, M.D.

1898 - 1961

Dr. George D. Burns of 42 Seymour Avenue, Shelton, Connecticut died July 5th at the Hospital of St. Raphael, New Haven, after four months' illness.

Dr. Burns was born in Shelton on May 1, 1898, son of the late Mr. and Mrs. George W. Burns. He was educated in the Shelton public schools and was graduated from Shelton High School with the Class of 1916.

Following a period of employment with the American Brass Company, he was admitted to the pre-medical course at Fordham University, where he attended from 1919 to 1921.

Following this he attended Yale University Medical School from which he graduated with a degree of doctor of medicine in 1925.

Dr. Burns interned at the Cincinnati General Hospital and St. Mary's Free Hospital for Children in New York City. He entered the private practice of medicine in Derby and maintained his office at 272 Main Street, for 34 years.

In 1941, Dr. Burns undertook a course in surgical techniques at the Peter Bent Brigham Hospital in Boston under the direction of Doctors Cutler and Zollinger. Following this, he was appointed a senior attending surgeon on the staff of Griffin Hospital.

Dr. Burns and his late wife were devoted to the establishment of a Catholic hospital in the valley community. A substantial sum towards the establishment of such a hospital has been bequeathed in his will, according to his family, to be added to funds previously given by him for this same purpose.

Dr. Burns is survived by three brothers, William A. Burns of Brooklyn, New York, Thomas J. Burns of Shelton, and Dr. Francis M. Burns of Shelton, and numerous nieces and nephews.

Denis S. O'Connor, M.D.

In Memoriam

Dubois, Franklin S.—New Canaan; University of Chicago Medical School, 1930; associate medical director at Silver Hill Foundation, New Canaan, and a member of the staff since 1937; prior to that he was professor of anatomy and chairman of the Department of Anatomy at the University of Alabama; he was a diplomate of the American Board of Psychiatry and Neurology, a Fellow of the American Medical Association, of the American College of Physicians and of the American Psychiatric Association, and a member of the American Neurological Association; Dr. DuBois was an associate attending neurologist at the Vanderbilt Clinic of the Columbia-Presbyterian Medical Center, New York City, consultant to the Department of Psychiatry, Greenwich Hospital, and consultant to the Department of Psychiatry and Neurology at the Norwalk Hospital; he was the author of many articles in the fields of neurology and psychiatry; died of cancer June 24, 1961 at the Harkness Pavilion of the Columbia-Presbyterian Medical Center, at the age of 55 years.

Murphy, James — Middletown; University of Pennsylvania Medical School, 1895; practiced medicine in Portland from 1893 to 1903 and thereafter continued practice in Middletown until his retirement in 1954; served as president of the Middlesex County Medical Association, the Connecticut Anti-Tuberculosis Society, and the Central Medical Society; was chairman of the Middletown Board of Health when first organized and continued as a member of the board until he retired from practice; he was the first radiologist at Middlesex Memorial Hospital and served as radiologist there for 25 years; he was chairman of the Medical Board of Middlesex Hospital and of its training school, a director of the hospital and of Long Lane School; a member of the Executive Board of the County Boy Scout Council; a member of the first city plan commission; a member of the medical staff for St. Luke's Home, physician for state teachers colleges, city school district physician and chairman of the first Middlesex Hospital fund drive which raised $50,000. He was an honorary life member and past grand knight of Forest City Council, Knights of Columbus; past navigator of Bishop McFranland Assembly, Fourth Degree Knights of Columbus, a charter member of the Rotary Club, and a member of the Middletown Scientific Society; died at his home June 23, 1961 after a long illness, age 88 years.

Roberts, Frederick W. — New Haven; Johns Hopkins Medical School, 1924; surgeon and assistant professor of surgery at Yale School of Medicine; Dr. Roberts was one of the founders of the Connecticut Division, American Cancer Society, and served as its first president; he was a native of New Haven, where he conducted his medical practice, and a veteran of World War I and World War II; Dr. Roberts also was an artist of recognized skill and his work was frequently exhibited, particularly in the exhibits sponsored by the Connecticut Physicians' Art Asociation; several years ago, his portrait of Dr. William Beaumont, was presented to the Wisconsin Medical Society as a gift from the Connecticut State Medical Society; his painting of the birthplace of Dr. Beaumont, in Lebanon, Connecticut was presented to the State Medical Society and is on permanent display at the Society's offices along with other paintings of historical medical significance; died suddenly when stricken with a heart attack at his summer home on Lake Sunapee, New Hampshire, July 4, 1961, age 61 years.

Thompson, Sidney A. — Greenwich; Cornell University College of Medicine, 1923; a native of Greenwich, Dr. Thompson practiced general surgery in that community for more than 35 years; he was attending urologist at Greenwich Hospital, attending surgeon at Bridgeport Hospital and a member of the staff at Greenwich Hospital and the United Hospital in Port Chester; he was a former instructor in anatomy at Cornell Medical College and at the Surgical Polyclinic Hospital, in New York; Dr. Thompson was a commander in the medical corps of the U. S. Navy and was on active service as a naval officer in both World Wars; he was a well known sailing enthusiast and was active in naval and sailing activities for many years; following World War II, he continued as attending surgeon at Greenwich Hospital, was later appointed consultant in surgery and in 1959 was named to the honorary staff; died suddenly at his home, July 3, 1961 at the age of 63 years.

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Rehabilitation

John C. Allen, m.d., *Hartford*

Indications

Rehabilitation is very frequently indicated following acute illness or injury, particularly where there is residual impairment of function. This "third stage" of medical care is designed to minimize the residual impairment and allow the individual to return to his previous employment or to place him in employment which is consistent with his functional ability. The more promptly this is done and the status of employment is reached, the less will be the cost to the patient and to the community.

We recognize three basic groups where rehabilitation is indicated:

(1) Where a decrease of impairment is possible through the development of increased range of motion, an increased degree of control and strength, and an increase in coordination and dexterity, all of which improve mobility and independence. This may imply the use of assistive devices such as braces, crutches, wheelchairs, and other more specialized mechanisms on either a temporary or a permanent basis for a particular purpose. The area of prosthetics is included in this group for function as well as for cosmesis.

(2) Where impairment is static and the actual disability cannot be further minimized. In this instance, rehabilitation is indicated to develop other functions to substitute for those lost, insofar as possible. Here, too, the use of bracing and mechanical assistive mechanisms are very freely used. This includes prosthetics, bracing, functional bracing, reconstructive surgery of soft tissue and bone, as well as mechanics of mobility such as wheelchairs, lifts and other devices in order to allow the greatest possible degree of independence and employability.

(3) Rehabilitation is also indicated where a disability is not static but is only slowly progressive where the use of rehabilitation techniques and equipment can offset the progression of disease, thus maintaining significant useage and function for a longer interval than would be possible without such rehabilitation procedures. This aspect of rehabilitation is being increasingly used in the older age group where chronic conditions are very frequently seen. These patients should be allowed the benefit of rehabilitation in order to maintain as much a degree of independence in self-care and other activities as long as possible. This is of utmost socio-economic importance in that the drain on the family, or community, financial and physical resources is minimized.

Objectives

There are five cardinal needs of a patient which are generally recognized and are spoken of as the objectives of rehabilitation. These are:

1. The need to communicate
2. The use of hands
3. Mobility
4. The need to appear normal
5. The need to have the opportunity to work

(1) We consider the need for communication as the paramount item in this group because it is basic for all activity of the patient and for everyone working with this patient. This may take the form of speech, but it may be necessary for the patient to use other means such as writing, use of a typewriter, or even signs. The ramification of problems created by aphasia are frequently stumbling blocks in retraining a patient. Such communication, relative to the interaction of a patient with his environment, is important for basic care and as a stepping stone to more complete interaction with society. This item is often glossed over, or handed off to a Speech Therapist, but all people working with such an individual must be aware of these needs and the special problems created when such communication is impaired, or absent, and every effort must be directed to the establishment of an adequate mechanism.

(2) The use of hands is second since personal independence depends almost exclusively on this function. In addition we are often dependent upon the use of hands as an assistive mechanism in communication such as writing, and typing, where speech is missing. The use of hands together with the upper extremities and trunk are frequently needed to develop the ability to move from one place to another as a substitute or as an assist in changing from one place to another, traveling or handling equipment for mobility purposes, and is invariably in the picture when employment status is reached. In this direction there are often assistive mechanisms used for aiding the promotion of holding, adjusting, moving, manipulating, and development of two-handed use.

(3) Mobility, earlier in the development of rehabilitation techniques and philosophy, was spoken of as the ability to walk and travel. This, of course, is an important item if a person is to be

independent but with the development of assistive mechanisms, including adjustments in automobiles which allow handicapped people to drive, we have tended to think of this in terms of mobility as a more all inclusive term. This includes the need to be able to change position, to change from bed, to chair, to feet, and back again, the ability to move from one place to another, either by means of some form of walking, or by use of adaptive equipment such as a wheelchair, or a walker. It very frequently brings into use such equipment as braces, crutches, canes, and prostheses. It includes the ability to move on a given level, and also the ability to change levels. Changing levels is spoken of as elevation and is very important in traveling outside a given building. It includes the problem of crossing a street in the time allowed by a traffic light, and includes crossing a curb effectively as is necessary in getting to a place of employment. It implies the use of stairs at least to a limited degree. Steps into a building are often the blocking item to employment. Inside most public buildings there are elevators which can be used but the simple problem of crossing a curb, or a few steps to get into a building can be extremely difficult. Therefore, mobility is significant in returning the individual to gainful activity.

(4) The need to appear normal is psychologically important. Anything which is unusual or out of the ordinary attracts attention. Most people who must wear special equipment, or who move in a bizarre manner are not happy with the attention and curiosity which results. This not infrequently will cause a patient to refuse to use needed equipment or he will refuse to use it in public and thus may prevent possible gainful employment, or effective function. Every effort is therefore necessary to procure effective use with the best cosmesis possible.

(5) The need to have the opportunity to work and return to gainful activity is the pay-off of the rehabilitation effort. Through selective placement a person may be so placed that for a particular job he is not handicapped, and is economically independent. Experience by industry with the suitably placed handicapped worker has been excellent, but there is still very extensive skepticism and unwillingness on the part of employers to hire such a worker. The right to work and earn a living is part of our birthright, and applies to the handicapped worker as well as anyone else. Such adequate placement is also the responsibility of the physician and needs more attention and effort than it has been receiving.

1961 MEETINGS

Sept. 25-26-27-28 — 63rd Annual Meeting of the American Hospital Association. Convention Hall, Atlantic City, N.J. For information on hotel reservations, write: American Hospital Association, 840 North Lake Shore Drive, Chicago 11, Illinois.

Sept. 27—36th Connecticut Clinical Congress, Mary S. Harkness Memorial Auditorium, Yale School of Medicine, New Haven.

Sept. 28 — Annual Meeting, The Connecticut Society of American Board Obstetricians and Gynecologists, Inc., at the New Haven Lawn Club, 193 Whitney Avenue, New Haven at 5:00 P.M.

Oct. 5-6-7—District No. 1 meeting of the American College of Obstetricians and Gynecologists at the Jimmy Fund Bldg., Childrens Medical Center, Longwood Ave., Medical School and Hospital area, Boston.

Oct. 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

Nov. 1—Symposium on Rheumatic Fever—Harkness Memorial Auditorium, Yale University School of Medicine, 333 Cedar Street, New Haven, 9:30 A.M.-3:30 P.M.

Nov. 6-7-8 — New England Postgraduate Assembly, Statler Hilton, Boston.

Nov. 27-30 — Clinical Meeting, American Medical Association, Denver.

Dec. 1 — New England Health Education Association—Fall meeting at 1200 Beacon St., Motel, Brookline, Mass.

1962 MEETINGS

May 3-4 — New England Health Education Association—Spring meeting—Andover Inn, Andover, Mass.

May 18-19 — Connecticut Society American Board Obstetricians and Gynecologists Travel Club meeting in Montreal.

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

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Special Notices

POSTGRADUATE GASTROENTEROLOGY

The American College of Gastroenterology announces that its annual course in Postgradute Gastroenterology will be given at the Sheraton-Cleveland in Cleveland, Ohio, on 26, 27, 28 October 1961.

The faculty for the Course will be drawn from the medical schools in an around Cleveland. The subject matter to be covered in the Course, from a medical as well as a surgical viewpoint, will be, essentially, the advances in diagnosis and treatment of gastrointestinal diseases. There will be comprehensive discussions of pancreatic disease, biliary tract disease, electrolytes, peptic ulcer, etc.

There will be an "X-ray Classroom" on the last afternoon, presented by an outstanding panel of specialists who will answer questions and present instructional demonstrations. There will also be a class in Cinegastrophotography.

One complete session will be held at the Cleveland Clinic and one at the Cleveland Academy of Medicine.

For further information and enrollment write to the American College of Gastroenterology, 33 West 60th Street, New York 23, N. Y.

Coolness Of Oxygen Tent Has Therapeutic Value

The cool environment of an oxygen tent can be of help in the treatment of a number of ailments during hot, humid weather, three New Orleans physicians reported recently.

Writing in the recent Journal of the American Medical Association, Drs. G. E. Burch, N. P. DePasquale and A. L. Hyman said they found a cool atmosphere was beneficial in the treatment of allergic skin rash, kidney disease, infectious diseases and thyroid disease in addition to heart disease and asthma.

"Except in certain instances maximal benefit to the patient was obtained simply by placing him in a cool environment with a normal oxygen concentration of the air," they said.

A warm, humid environment increases the work of the heart, they said. Even though a person is resting in bed, hot weather forces the heart to work harder to maintain the body's normal temperature, they said.

"Under such environmental conditions cardiac as well as other debilitating diseases are less likely to improve," they said.

In a study of 10 patients, the authors said, they found in every instance cardiac output, or work, was higher when the patients were in the warm environment than when they were in oxygen tents.

In patients without heart disease, average cardiac output was 49 per cent lower inside the tent, they said. In patients with heart disease, average cardiac output was 42 per cent lower inside the tent, they said.

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Minimum Standards For An Ambulance Service

(By the Committee on Accident Prevention of the Connecticut State Medical Society)

The Accident Prevention Committee of the Connecticut State Medical Society offers the following outline of minimal standards for the guidance of the operators of an ambulance service. It is to be emphasized that these are minimal requirements and local conditions may dictate a much more comprehensive program. The Accident Prevention Committee received valuable suggestions in formulating these standards from the Connecticut Ambulance Association, numerous independent ambulance services, the Connecticut Committee on Trauma of the American College of Surgeons, and representatives from various county medical associations.

Ambulance services wishing assistance or advice in training their personnel can undoubtedly obtain this by contacting the American Red Cross, the county medical associations, the local directors of health or the state police.

I. Ambulance and its Operation

A. Any vehicle used as an ambulance should be kept in good mechanical condition, inspected periodically to assure that it continues to meet mechanical standards.

B. Each ambulance should be kept in a clean and sanitary condition at all times.

C. After transportation of a patient with a contagious disease, the ambulance should be properly cleaned and disinfected to the satisfaction of the local director of health of the community where it is based.

D. The ambulance should be operated only by an experienced licensed driver.

E. Operator of an ambulance should conform as nearly as possible to all motor vehicle laws and regulations including speed limits, remembering that excessive speed is seldom necessary or desirable and may be detrimental to the patient's safety.

F. Sirens should be used with discretion as indicated by traffic conditions and common courtesy of the road. The excessive use of the siren is to be condemned.

G. It is highly desirable that each ambulance be manned by two persons, one or both of whom should be fully qualified in first aid and skilled in handling sick and injured persons.

H. A person should never be transported without an attendant, preferably trained for this work—or lacking this, by a suitable adult.

I. An ambulance should be satisfactorily heated for the patient's comfort.

J. It is highly recommended that each ambulance be covered by a personal liability insurance in suitable amount.

II. Equipment for Ambulance

A. An 8-BC fire extinguisher as rated by a nationally recognized testing laboratory should be a part of each ambulance equipment.

B. Each ambulance should be equipped with a satisfactory carriage, cot or stretcher; blankets, sheets and pillows.

C. Oxygen and necessary equipment for its administration should be available. All heavy equipment must be securely fastened.

D. Splints and first aid equipment as follows:

1. Large sterile pads or dressing measuring approximately 8" x 10"
2. Sterile gauze pads in assorted sizes.
3. Two inch, three inch, and four inch roller bandages, either gauze or muslin.
4. Adhesive tape.
5. Satisfactory tournaquet.
6. Tongue blades (one padded to be used as mouth gag).
7. A tube for mouth-to-mouth resusitation.
8. Bandage shears.
9. Safety pins, large.
10. Triangular bandages.
11. Hinged half ring splints for fractures of the thigh with necessary webb strap for ankle hitch.
12. Padded boards of varying sizes to be used as splints.

III. Minimal Training for Ambulance Attendants

A. Basically, each attendant should have passed an American Red Cross Advanced First Aid Course or its equivalent. Special attention should be paid to the proper handling of the various types of patients, including the heart patient, the mental patient, and the seriously injured patient.

B. Attention should be paid to the proper means of transporting the patient to and from the ambulance.

C. Special training in obstetrical emergencies is advisable.

D. Thorough training in the proper use of oxygen equipment and in one or more means of artificial respiration.

Annual Reports

OF THE CONNECTICUT STATE MEDICAL SOCIETY

1960 - 1961

(Concluded)

REPORT OF COMMITTEE TO STUDY RESOLUTION ON HOSPITAL ACCREDITATION

At the semi-annual meeting of the Society's House of Delegates, held in Hartford, December 6, 1960, a resolution was introduced from the floor which called for "study and possible action by the Society on certain matters relating to the accreditation of hospitals." An integral part of this motion was that the president of the Society should appoint a committee to make this study and report its findings and recommendations to the House of Delegates at its next meeting. The president appointed this committee with this speaker as chairman. In addition to the above resolution a related resolution adopted by the Council on January 4, 1961, introduced on behalf of the Norwalk Medical Society by its councilor Dr. E. Tremain Bradley, was also studied.

Although this Committee has had only one meeting, there has been considerable discussion concerning the two resolutions as well as communications with the Chairman of the AMA Council on Medical Education and Hospitals, Dr. Leland S. McKittrick and the Council's Secretary, Dr. Walter Wiggins, and other physicians close to the problem of the "vanishing interne."

The purpose of the resolution as learned from its original proposer, which was introduced in December at the House of Delegates Meeting was to inform the House that if a small hospital approved for and requiring six or less internes should not receive its quota for two successive years, this hospital would "possibly" lose its approval for internship training, and would have to reapply for such approval and be re-examined when its interne requirements were met. One hospital that I know of (Manchester Memorial) received a communication to this effect from the Council on Medical Education and Hospitals.

Underlying this problem is the national shortage of internes and the simple facts, which are well documented by many reports over the past ten years, show that there are two approved internship places available for every prospective interne. As of March 1961, there were 12,686 internships available and 6,637 graduates to fill these places. Unfilled internships total 6,049 in 1961.

To cope with this developing situation, in 1952 a National Matching Plan was established which has now completed its tenth year. This plan is supported and operated jointly by the following organizations: American Hospital Association, Association of American Medical Colleges, Catholic Hospital Association, Council on Medical Education and Hospitals of the AMA, and the Student American Medical Association. The Board of Directors includes a student representative at-large as well as a S.A.M.A. representative.

In regards to a situation wherein a hospital approved for a certain number of internes did not fill its quota, there are only two reasons: (1) the applicants preferred other hospitals having vacancies, (2) the applicant asked not to be matched with the hospital (ranked it x).

From a study of the way Connecticut Hospitals fared in the 1961 Matching Plan, it is seen that of the nineteen hospitals with approved internship programs, only three hospitals received their desired quota of internes and one of these was a University Hospital Program with its own medical school.

None of the nineteen hospitals received no interns from the Matching Program.

Only two hospitals received fifty percent of their approved and desired quota.

From these few figures it is clear that for their first choice, prospective internes pick only one-tenth of approved available hospitals in Connecticut and pass over completely fifty percent of our available hospitals as places wherein they do *not* wish to serve their internships.

From another viewpoint Connecticut Hospitals offered 217 approved internship positions, of which 94 were filled (45%).

In the three hospitals filling their desired quota, 68 places out of 69 were filled.

This means that 72% of this years interne applicants for Connecticut Hospitals desired to train in only three of the approved nineteen hosptials.

This ratio is pretty nearly the same for all states whose statistics I have studied.

At the Annual and Clinical Meetings of the AMA House of Delegates which I attended as your delegate during the past three years, the Reference Committee Hearings of the Committee on Medical Education and Hospitals have always been my number one preference for attending, and at these discussions I have heard the many resolutions presented at each House of Delegates Session discussed by doctors from every state in the country. The arguments have the same general tenor at each meeting, i.e., a discussion of the relative merits of interne training in a medical center hospital is contrasted with a non-medical center hospital; or of a good, small hospital apart from a medical center trying to work out its own destiny as compared with a small hospital which through medical school affiliation receives internes because of its satellite connections. But despite considerable feeling to the contrary about relative values of training in hospitals where there is more teaching and fewer ward patients as in those where there are more clinical patients and less teaching the annual results of the Matching Plan show conclusively that prospective internes choose the hospitals with well known and long recognized teaching programs.

The Norwalk Medical Society's resolution requesting the AMA to review promptly the number of approved internships with a view to equalizing supply and demand is already under study by the AMA Council. Another part of the resolution to request the AMA to adjust the "so called" Matching Plan according to supply and demand is obviously against all the reasons for the establishment of the Matching Plan. None of the participants in the Matching Plan is in favor of any attempt to coerce or attempt to dictate to any medical graduate the hospital in which he will or will not train. The prospective interne picks his own hospital, and his choice in the great proportion of cases is that hospital where he expects to continue his education and secondly where the living conditions and stipends approximates his present needs.

Now on the practical side of the picture, what can we do about the interne deficit in our hospitals?

A Study Committee has been formed by the Council on Medical Education and Hospitals of the AMA charged with the responsibilities of "recommendations regarding the most feasible and logical methods for overcoming the present disparity between the number of internship positions available and the number of internes available to fill these positions and also methods whereby necessary hospital services normally performed by internes or residents can be accomplished through utilization of other techniques and personnel."

We might request the AMA House of Delegates to ask the Council on Medical Education and Hospitals, which is the internship approval body, not to disapprove of a given hospital interne program solely because of the hospital's inability to obtain internes for two successive years. There are many problems associated with such a request however, such as; How long should the Council allow a hospital to go without internes before withdrawing interne-training approval? and how many hospitals would maintain standards for interne-training after having had no internes to train for several years? There are many small fine hospitals which have voluntarily given up their internship approvals and sought other ways to provide for interne's services until such time as they may be able to provide programs which will attract internes again.

A pilot study that the Council on Medical Education and Hospitals is engaged in now with the Academy of General Practice is the setting up of a two year Family Practice Training Program in good hospitals with adequate out patient facilities. The medical school graduate enters into this program just as if he were starting his interne year. This type of program might well be investigated by qualified small hospitals.

We could request the Chairman or Secretary of the Council on Medical Education and Hospitals to come before this House of Delegates to tell us about the present status of this entire matter, although the Council of C.S.M.S. has already disapproved this suggestion.

Personally I do not believe that much can be done in the future to procure house staff for the smaller hospitals. Prospective interne's desires for continued education during their hospital training period are too firmly established now to change this philosophy over to any other including those with high salaries and country club living facilities. It is this speaker's opinion that in the foreseeable future there will be little or no house staff available in those hospitals which now have few or no internes; and that these hospitals, together with many other good hospitals adequately providing for community health, will find methods to replace the services formerly performed by the vanishing interne.

Respectfully submitted,
James R. Cullen

REPORT OF THE COMMITTEE ON RELATIVE VALUE STUDY

The Committee on Relative Value Study is now approaching the end of the second year of its function. The committee has now completed the first phase of its work consisting of a draft of an entirely new list of medical services by all representative sections and subspecialties. In addition, the ground rules of the Study and introductory remarks as well as the basic form of the questionnaire have been drawn up and submitted to the State Medical Society for consideration.

A letter has been addressed to the Council specifically as regards professional services which will be needed for proper coding, final draft of the questionnaire, and printing. This committee is waiting further action pending approval of these considerations by the Council.

The fruition of the Relative Value Questionnaire has perhaps been delayed by the fact that this State has started from scratch in a complete new draft of nomenclature of medical services. This is a departure from other states which have merely adopted the California Survey and modified this to suit their own needs.

Respectfully submitted,
Benjamin D. Thaw

REPORT OF THE COMMITTEE ON REHABILITATION

Since the appointment of the committee in mid-December, 1960 there has been one meeting held on February 14, 1961 for organizational purposes. At this time general concept and purpose of the committee was discussed in some detail together with a beginning plan of action which is in the processs of institution.

This is the only meeting of the committee so far, all members of the committee were in attendance. There are no specific recommendations at this time being made. We all feel that the committee has a very definite objective and a useful purpose for existence and a copy of this statement is going to all committee members. The general plan is to hold monthly meetings for the next several months in order to establish a plan of action and then depending on indications perhaps less frequent meetings will be indicated.

Respectfully submitted,
John C. Allen

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Drug Treatment Of Hyperthyroidism

The classical syndrome of severe hyperthyroidism is only occasionally encountered, but milder hyperthyroidism is common; in this condition, the results of therapy with antithyroid drugs are often gratifying and lasting. Many experienced physicians find that the drugs are worth trying even in patients with severe hyperthyroidism or toxic nodular goiter, though relapse is more frequent; if control proves difficult, or drug sensitization develops, radioactive iodine or surgery can be used. The antithyroid drugs may also be used in severely hyperthyroid patients before surgery or before radioactive iodine is administered.

Drugs in Use—Propylthiouracil USP, methimazole USP (Tapazole—Lilly), carbimazole BP (Neo-Mercazole—British Schering), potassium perchlorate, methylthiouracil USP (Muracil—Organon), and iothiouracil (Itrumil—Ciba) are among the drugs used both in the United States and abroad.

The interval between the beginning of therapy and therapeutic response may vary from a few days to many weeks. To assure continuous effect the compounds should be administered on a regular schedule, usually every eight hours around the clock. Where the hyperthyroidism is severe, the interval may occasionally have to be shortened to six or even four hours. The average dosage of the various compounds is as follows: propylthiouracil, methylthiouracil and iothiouracil—300 mg. per day; methimazole and carbimazole—30 to 60 mg. per day; potassium perchlorate—600 to 1,000 mg. per day.

Toxic Effects—Fewer than 10 per cent of patients experience toxic effects with the antithyroid drugs. Toxic reactions include drug fever, nausea, pruritus, rash, edema, conjunctivitis, salivary-gland enlargement and, rarely, thrombocytopenia, leukopenia and agranulocytosis. The patient should be cautioned to stop medication immediately if any reaction occurs, and to report to the physician for a white blood count (routine blood counts are not necessary or helpful). If a toxic reaction occurs with one drug, it is often possible to shift the patient to another in the group of drugs without a recurrence of the toxic reaction. Drug therapy must be stopped altogether, however, if the patient develops agranulocytosis.

There is no agreement that any one of the drugs is superior to the others either in effectiveness or in lack of toxicity, though most *Medical Letter* consultants start therapy with propylthiouracil or methimazole. Perchlorate has not been reported to cause agranulocytosis when taken at the dosage level of 600 mg. per day. However, at doses of 1,000 mg. per day, not infrequently required for control of hyperthyroidism, agranulocytosis has been reported. One of the drugs, Itrumil, combines iodine with thiouracil, but the added iodine may confuse subsequent assays of thyroid function by radioactive iodine and by serum protein-bound iodine tests.

If any of the drugs are used in a pregnant patient with hyperthyroidism and the BMR is allowed to go below −5, the baby may be born with a goiter. If goiter does develop, however, it will soon regress without therapy. The drugs should not be administered to nursing mothers since they are secreted in the milk.

Radioactive Iodine—Radioactive-iodine therapy is now administered to adult patients in most medical centers, and it is generally very effective. Experience over 19 years has so far failed to support early fears that such therapy *in the adult* might be carcinogenic, or leukemogenic, or that it might interfere with reproduction. Some physicians treat patients of any age after adolescence with this isotope; many utilize it only in patients over 40 years of age or in those below this age who have had previous thyroid surgery. Although there is no fetal thyroidal uptake of radioiodine until the beginning of the second trimester of pregnancy, it is now generally agreed that radioiodine therapy should not be given at any period of pregnancy.

Dosage of radioactive iodine is determined by the size of the goiter and the uptake of a tracer dose—about 2.5 to 20 millicuries. The full effect of a single dose is apparent only after two to six months. Second and third doses may be required in 15 to 20 per cent of the patients. A few patients may require a fourth dose. Myxedema occurs in about five per cent of patients on full doses of radio-active iodine; smaller doses lessen the problem of myxedema at the expense of a higher incidence of relapse and the need for a greater number of doses. The total cost to a patient of a single treatment ranges from $75 to as much as $400. The approximate cost of the two most commonly used drugs is as follows: propylthiouracil—$2 to $3 per hundred 50-mg. tablets (the daily cost of medication is 12 cents to 18 cents); methimazole—$2 per hundred 5-mg. tablets at a cost of 12 cents a day. Potassium perchlorate is generally available only in powder form, but it can be made up into capsules or tablets by the pharmacist.

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CONNECTICUT MEDICINE

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Volume XXV SEPTEMBER, 1961 Number 9

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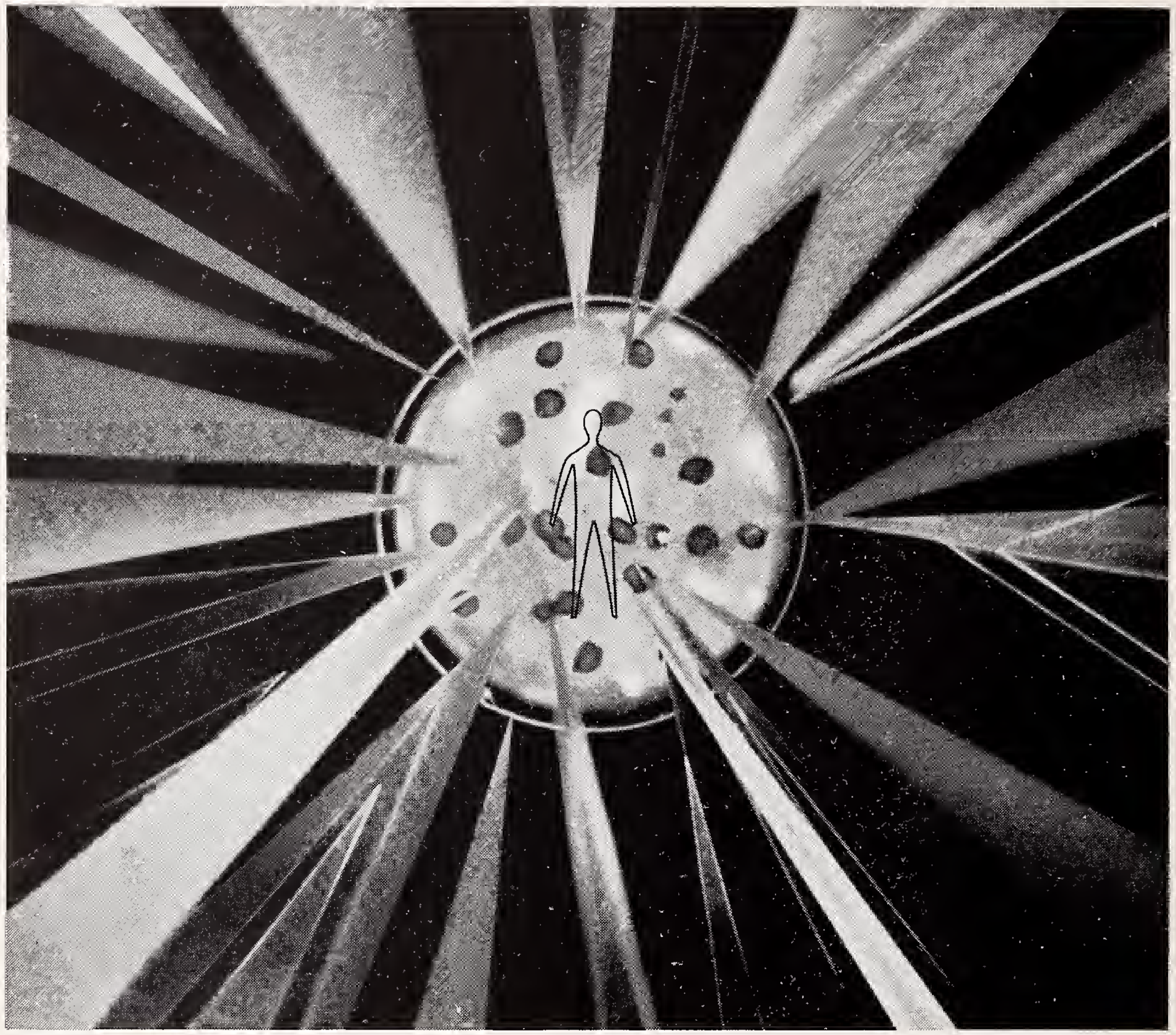

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CONNECTICUT MEDICINE

VOL. XXV SEPTEMBER, 1961 NO. 9

THIRTY-SIXTH CONNECTICUT CLINICAL CONGRESS
of the
CONNECTICUT STATE MEDICAL SOCIETY
and the
YALE UNIVERSITY SCHOOL OF MEDICINE

Yale-New Haven Medical Center
Mary S. Harkness Memorial Auditorium
333 Cedar Street
New Haven, Connecticut

WEDNESDAY, SEPTEMBER 27, 1961

GENERAL INFORMATION

REGISTRATION:

Registration will begin at 9:00 A.M. The registration fee of $5.00 provides for admission to all sessions of the Congress.

Hospital residents and interns will be admitted without charge, if a statement of their position, signed by an official of the hospital, is presented at the registration desk.

MEETING PLACE:

All sessions will be held in the new Mary S. Harkness Memorial Auditorium in the Sterling Hall of Medicine at the Yale-New Haven Medical Center. The entrance is at 333 Cedar Street. This comfortable auditorium will accommodate an audience of 450.

TELEPHONE:

Telephone messages will be received at New Haven LOcust 2-1161, Extension 440.

LUNCHEON:

Luncheon for visiting physicians will be available in the Memorial Unit Cafeteria.

PARKING:

Parking area for visitors is adjacent to the Oak Street Connector between York Street and Park Street, behind the Memorial Unit. There are also pay parking lots on Howard Avenue.

The Yale-New Haven Medical Center is about one-half mile west of the New Haven Green. It is easily reached from the Connecticut Turnpike (via Exit 47) or from the Wilbur Cross Parkway.

PROGRAM

WEDNESDAY, SEPTEMBER 27, 1961

9:00 REGISTRATION

MARY S. HARKNESS MEMORIAL AUDITORIUM

Morning Session

9:10 WELCOME AND OPENING REMARKS

Vernon W. Lippard, *Dean.*

Paul B. Beeson, *Ensign Professor of Medicine, presiding*

9:30 NEW TECHNIQUES OF TISSUE DIAGNOSIS IN INTERNAL MEDICINE

Paul Calabresi, *Instructor in Medicine and Pharmacology*
Lawrence R. Freedman, *Assistant Professor of Medicine*
Walter R. Thayer, *Instructor in Medicine*

10:30 STEROID THERAPY IN CHILDREN

Frederic M. Blodgett, *Associate Professor of Pediatrics*

11:00 DRUG THERAPY IN THE NEWBORN

Louis Gluck, *Assistant Professor of Pediatrics*

11:30 CLINICAL PATHOLOGICAL CONFERENCE

Milton R. Hales, *Associate Professor of Pathology*
Discussant: Arthur J. Geiger, *Clinical Professor of Medicine*

1:00 LUNCHEON

Afternoon Session

Gustaf E. Lindskog, *William H. Carmalt Professor of Surgery, presiding*

2:00 MANAGEMENT OF ADVANCED PELVIC MALIGNANT DISEASE

Paul Calabresi, *Instructor in Medicine and Pharmacology*
Gilles D. Hurteau, *Instructor in Obstetrics and Gynecology*
John McL. Morris, *Professor of Gynecology*
Carl F. von Essen, *Assistant Professor of Radiology*

3:15 PROBLEMS IN THE MANAGEMENT OF UPPER GASTROINTESTINAL HEMORRHAGE

William W. L. Glenn, *Professor of Surgery*
Ira S. Goldenberg, *Assistant Professor of Surgery*
Woodrow W. Lindenmuth, *Associate Professor of Surgery*
Howard M. Spiro, *Associate Professor of Medicine*

Notes

All participants in the Clinical Congress this year are members of the faculty of the Yale University School of Medicine.

Time for questions and discussion will be a part of the morning and afternoon sessions.

Special clinical and scientific exhibits will be displayed in the lobby of the Mary S. Harkness Auditorium.

Plan Now To Attend.
Make A Note Of This Date
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DECENTRALIZED vs. CENTRALIZED INTENSIVE CARE OF THE HOSPITAL PATIENT

WILLIAM BEECHER SCOVILLE, M.D.
ERNEST C. SHORTLIFFE, M.D.
Hartford

Dr. Scoville. *Department of Neurosurgery, Hartford Hospital, Hartford. Chairman, Intensive Therapy Committee, Hartford Hospital, Hartford.*

Dr. Shortliffe. *Associate Director, Hartford Hospital, Hartford. Director, Presbyterian-University Hospital, University of Pittsburgh, Pittsburgh.*

In the past five years, especially in Connecticut, much emphasis has been given to the development of centralized Intensive Care Units.

In the smaller less specialized hospitals without group nursing teams, such units have resulted in greatly improved care of the critically ill patient and permitted their concentration in areas containing all needed technical equipment and supervised by around-the-clock teams of resident and nursing personnel. Such an Intensive Care Unit contains those acutely ill patients needing more or less continuous observation or treatment for a period of days but not weeks, and does not include terminal care patients nor continuous care, non-critical patients. Exponents of these centralized units have written extensively and well in recent years (1-38). However, it was not until last year that an occasional article appeared arguing for decentralization, especially in larger hospitals. Attention is particularly called to the article from the Winnipeg General Hospital,[39] giving a very adequate description of the advantages of decentralization in certain large Canadian hospitals.

The Hartford Hospital, through its intensive therapy committee, has studied this problem for the past two years and has reached a similar conclusion: i.e. decentralized units offer a greater advantage in large hospitals which are divided into well established surgical and medical specialty departments. These advantages are as follows: (1) Specialty departments in their organization already have nursing and resident around-the-clock care plus specialized equipment. By the very complexity and definition of "specialties," such teams cannot be made interchangeable with other specialty teams. (2) Patients needing intensive care always constitute the greatest scientific and therapeutic challenge within these specialties; hence, they should be accessible for study and stimulation to all nurses, residents and doctors engaged in the specialty involved. (3) Medical and surgical intensive care units will have little in common in their needs, the medical requiring laboratory experts and isolation techniques; and the surgical requiring much mechanical equipment and almost continuous observation and nursing procedures. (4) Knowledgeable supervision and direction of the multiple specialties cannot be administered by a single physician or nurse, and the chances of disputes in authority are legion.

In our opinion it seems to be feasible, within those specialty departments requiring intensive therapy, to construct four or eight bed cubicles on the departmental ward and situated directly adjacent to the central nursing desk. Here are concentrated all critically ill patients requiring intensive care. These one or two cubicles may be interconnected, as well as connected by direct entrance to the central nursing area together with half-height glass walls, thus permitting continuous around-the-clock visual and auditory team nursing supervision. Such departments as those involving neurosurgery, cardiothoracic surgery, general surgery, internal medicine and possibly pediatric surgery can benefit from such decentralized units.

As a result, the most critical as well as the most challenging patients may be seen and studied by the entire medical and nursing staff within departments. They are in closest proximity to medications, equipment and emergency personnel. As they improve they may be moved to cubicles in the same wards placed at farther intervals from the center desk, maintaining continuity of care by the same personnel on the same ward throughout their hospital stay. They will thus offer teaching material to a far larger number of departmental personnel than is possible in centralized units. This latter factor plays an important part in the organization of a large teaching hospital whether it be university or community in type.

Discussion and Conclusions

These brief remarks are offered more in an effort to express the philosophy rather than the technical means of developing intensive care of the more critically ill hospital patients. Decision as to the proper approach is directly dependent on the size, complexity and specialization of the hospital proper, and even on the frame of mind of its personnel. In those hospitals in which all of these factors have reached a high degree of development, separate intensive care units contained within departmental wards may prove preferable to single large centralized units. Large units may even hinder progress in the development of medical and surgical specialties; for specialization by definition requires differentiation, and therefore separation.

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Connecticut Medicine
September, 1961

PROBLEMS IN THE DIAGNOSIS OF PHARYNGEAL PARESIS

JOHN A. KIRCHNER, M.D.
New Haven

The Author. *Chairman of Section, Otorhinolaryngology, University Division, Grace-New Haven Community Hospital, New Haven. Associate Professor of Otolaryngology, Yale University School of Medicine, New Haven.*

Within the narrow confines of the hypopharynx, an area comprising the pyriform sinuses and postcricoid area, one may encounter a surprisingly large variety of disorders producing symptoms. Mechanical obstruction by neoplasm or stricture may produce dysphagia, aspiration, and cough. Narrowing of the lumen by mucosal atrophy in Plummer-Vinson syndrome or encroachment on the lumen by cervical exostoses may interfere with swallowing. Pulsion diverticulum may produce dysphagia, regurgitation, and cough. Increase in the tonus in the cricopharyngeus muscle may cause vague sensations of tightness and choking.

These conditions can usually be diagnosed by a careful history and a combination of physical, neurological, radiological and endoscopic examinations. The exception to this general rule is a disorder which may present a perplexing problem in diagnosis even after thorough investigation with all available techniques; namely, isolated pharyngeal paresis. This condition is usually due to a lesion in the upper portion of the vagus nerve trunk and may be the result of injury by chemical or bacterial toxins, by trauma, tumor, certain degenerative disorders or by localized vascular accidents in the region of the nucleus ambiguus. Supranuclear lesions may also produce dysphagia and voice changes if they involve the corticobulbar tracts of both sides.[1–10]

Pharyngeal paresis may exist in the absence of other neurological disturbances or may precede them and may closely simulate neoplasm of the hypopharynx both by mirror examination and by roentgenogram. Of approximately 15 cases of nonpoliomyelitic pharyngeal paresis admitted to this hospital during the past three years, five were sent in with an admission diagnosis of carcinoma of the hypopharynx or upper esophagus because of various combinations of dysphagia, "exudate" in one pyriform sinus, "edema" and fullness of one side of the larynx, and other suggestive findings.

Curiously enough, the failure to find tumor by endoscopy may still leave the diagnosis in doubt, a fact dramatically illustrated during my internship, in an elderly woman admitted with dysphagia of several months' duration. Barium studies were interpreted as showing a space-occupying lesion of the hypopharynx. The "filling defect" on X-ray was so strongly suggestive of neoplasm that after esophagoscopy failed to reveal tumor, surgical exploration of the neck was carried out on the assumption that an extrinsic mass was present and was making pressure on the hypopharynx. In retrospect, it is obvious that the asymmetry in the barium-filled hypopharynx was due to inadequate emptying by the atonic musculature on one side, particularly since a diagnosis of neurological disease was made before the patient left the hospital.

There are certain remarkable similarities between pharyngeal paresis and carcinoma of the hypopharynx in the history, physical and endoscopic examination, and by radiological studies.

History

A. Dysphagia. This may be present in either condition. In carcinoma of the hypopharynx, it results from mechanical obstruction at the esophageal inlet, tends to come on rather slowly, and is noticed first for solids, then for liquids.

In pharyngeal paresis, dysphagia results from involvement of the constrictor musculature of both sides. Although complete unilateral paralysis has been shown to be compatible with normal degluti-

Reprint from The Laryngoscope, Vol. LXVIII, No. 9, p. 1641-1654, Sept., 1958.

tion,[5,10] many patients with dysphagia present a predominantly unilateral atony of the pharynx on radiological examination with barium. It is probable that both sides have been involved in the neurological disorder, but that the weakness is greater on one side. This is particularly apt to occur in patients with a previous mild cerebral vascular accident.

B. Hoarseness. A postcricoid carcinoma, which involves the anterior wall of the hypopharynx, may infiltrate the cricoarytenoideus posticus muscle, the strong abductor of the cords. This produces a limitation of motion and resultant changes in voice.[11] A postcricoid or pyriform sinus tumor may also produce hoarseness by infiltrating laterally and inferiorly to involve the recurrent laryngeal nerve.

Vagus nerve lesions located between the nucleus ambiguus and the ganglion nodosum cause paralysis of the cord, usually in a para-median position.[5,10]

C. Cough and Choking. In carcinoma of the hypopharynx, local irritation may produce cough. In both tumor and paresis, inadequate emptying of the pharyngeal recesses allows aspiration of the excess secretions with resultant cough.

Physical Findings

A. Mirror Examination. Indirect examination of the larynx and hypopharynx may be very uninformative. Unless a tumor has outgrown the depths of the pyriform sinus or postcricoid space, there may be no view of the neoplasm itself. A motionless vocal cord may be present in either condition (see above). Saliva or food lodged in the pyriform sinus on the paralyzed side may look like exudate and may simulate a keratinizing neoplasm.

What looks like edema may actually be relaxation and bulging of the atonic musculature of the ventricular band or of the lateral pharyngeal wall. This may simulate a tumor deep in the pyriform sinus.

B. Palpation of the Trachea. Palpation of the trachea may reveal forward displacement in either condition: In postcricoid tumor by pressure from behind the cricoid, in pharyngeal paresis by relaxation of the cricopharyngeus muscle which usually supports the cricoid tightly against the cervical vertebrae.[12] What is more remarkable, the trachea may deviate from the mid-line position in either condition: in neoplasm, as the result of pressure from postero-laterally; in paresis, from relaxation of the supporting musculature on one side. Deviation of the larynx and trachea in unilateral paresis of the pharynx is rather difficult to explain, yet it has been seen in two cases. Two possible mechanisms for this deviation suggest themselves: *1.* relaxation of the middle and inferior constrictors of one side, allowing those of the active side to rotate or displace the larynx and hyoid; and *2.* lateral pressure by food retained in one pyriform sinus.[13]

Neurological Examination

In both pharyngeal paresis and hypopharyngeal carcinoma the patient may initially show no other sign of disease. Weakness of the other three posterior cranial nerves should be looked for, and movements of the soft palate, tongue, posterior wall of the pharynx, sternocleidomastoid and trapezius muscles observed. Certain disorders of the posterior group of cranial nerves have been described by Schmidt, Avellis, Vernet, Jackson, Tapia, and Collet-Sicard.[14] These syndromes consist of various combinations of dysphagia, hoarseness, dysarthria, nasal regurgitation, and sensory and motor disturbances of the trunk and extremities. They are usually due to obvious neurological disorders and do not present the type of problem in differential diagnosis under discussion here.

Radiological Examination

This usually consists of a plain antero-posterior view; lateral view of the neck, fluoroscopic study of the barium swallow and comparison of the two sides of the barium-coated hypopharynx during the Valsalva maneuver. Careful radiological examination is probably the most important single measure in the evaluation of pharyngeal paresis of any type.[15–21] Here again, however, there are certain pitfalls:

1. Lateral Film. The plain lateral film is one of the most useful views in distinguishing between tumor and paralysis in this area, and yet there may be a soft tissue mass behind the larynx in either condition; in tumor, because of neoplasm; in paresis, because of the anterior sagging of the atonic inferior constrictor muscle or because of spastic contraction of the muscle in supra-nuclear lesions.

2. Barium Swallow Film. "Filling defect" may be deceptive and may represent the normally emptied side of the hypopharynx after the swallow has been completed. Fluoroscopic observation during swallowing will show that the radio-opaque side of the hypopharynx is paretic.

Since certain individuals tend to use only one pyriform sinus in swallowing a small amount of fluid, the filling ability of both pyriform sinuses must be checked by: *1.* having the patient turn his head first to one side, then to the other while swallowing, so as in each case to direct the fluid into the opposite pyriform sinus; *2.* having the patient swallow a large enough amount of barium to fill both pyriform sinuses at the same time. It may be difficult to get the patient to swallow a large

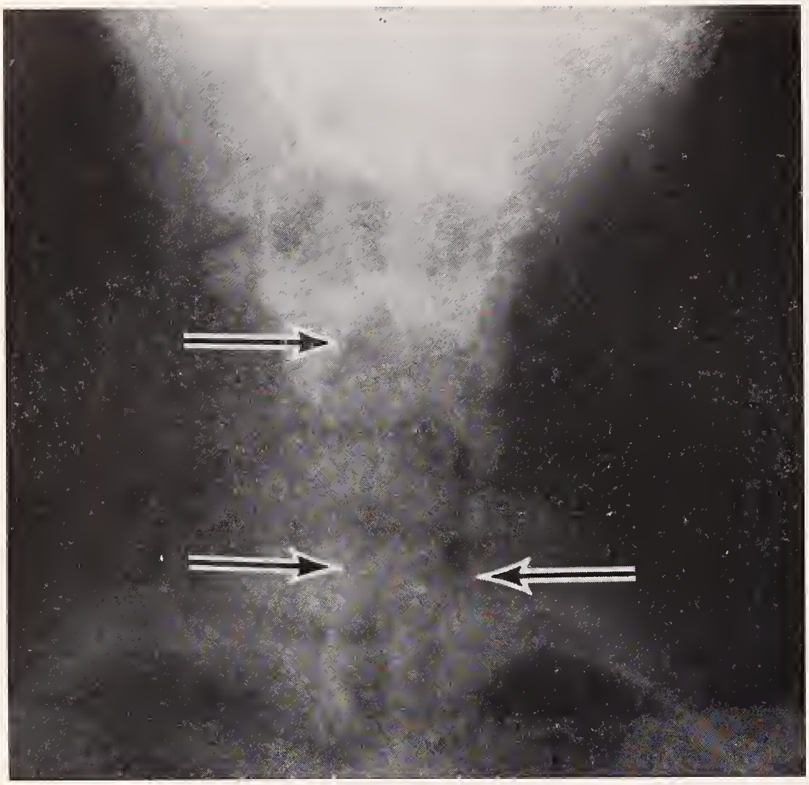


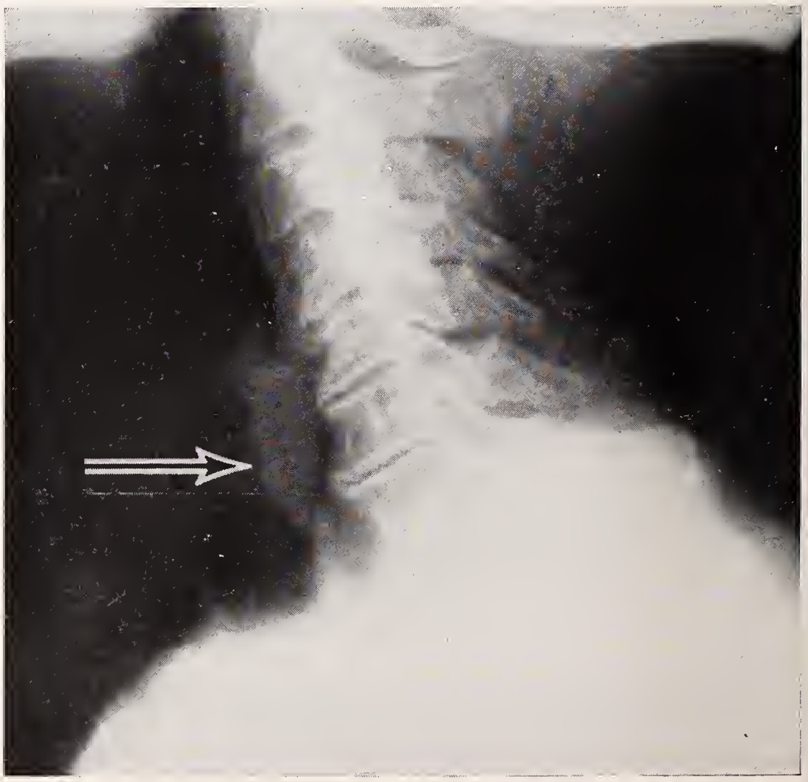
Figure I
(E.H.) Irregularly outlined area of radiolucency behind the cricoid cartilage (upper arrow), with puddling of barium in the hypopharynx and valleculae, chiefly in right pyriform sinus. Dilatation of right pharyngeal wall and deviation of trachea to left (lower arrow). Compare this picture of pharyngeal paresis with Figure III, retrocricoid carcinoma.

mouthful of fluid since he realizes that even small amounts will produce coughing. Templeton[16, 17] states that a paretic pharynx will accommodate larger amounts of barium mixture if this is administered while the patient is in a supine position. In this position, both pyriform sinuses will fill initially as is shown by Fig. 7.

Food particles which may have been retained in the pyriform sinus should be looked for before barium studies are done.

3. Valsalva's Maneuver. The Valsalva maneuver, a forced expiratory effort against a closed mouth and nose, may outline the superior edge of a tumor, or it may show ballooning of the atonic side in unilateral pharyngoplegia. This is a most useful diagnostic test.

Figure II
(E.H. Soft tissue density in retrocricoid area, the result of atony of the cricopharyngeus muscle. Compare with Figure IV, retrocricoid carcinoma.



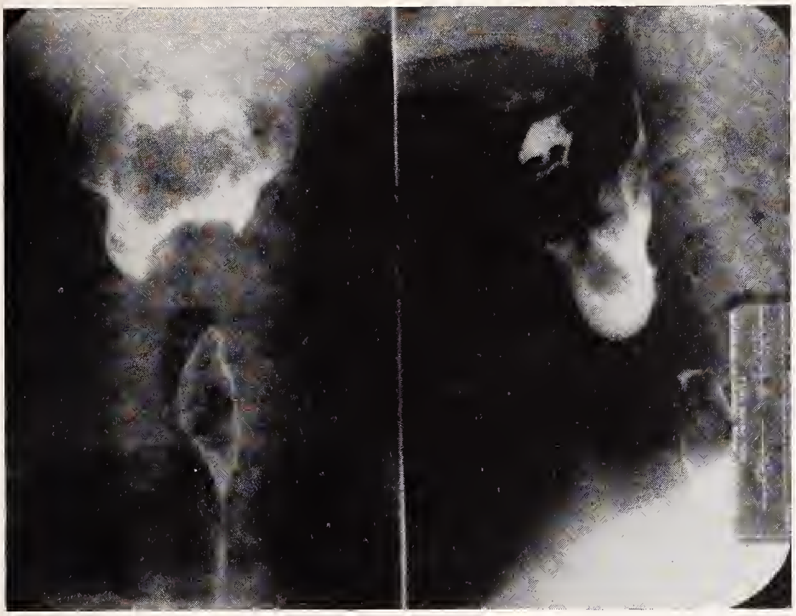


Figure III

(V.W.) Valvalva maneuver showing slight dilatation of pharynx, particularly of right pyriform sinus, in a case of retrocricoid carcinoma. Compare with Figure I.

Case Histories

Case 1. Dr. E. H., 71-year-old dentist, admitted with inability to swallow of four days' duration.

Present Illness—four nights before admission he awoke from sleep with tightness of the throat, moderate intermittent dyspnea, and hoarseness; on admission he could not swallow even fluids, and his voice was hoarse.

Mirror Examination—There is puddling of milk and saliva in the right pyriform sinus. The right vocal cord is motionless in the midline. The right false cord is markedly edematous, and there is a grayish mass visible deep in the pyriform sinus below the arytenoid cartilage on the right side.

Impression—Carcinoma of the right pyriform sinus or hypopharynx with involvement of the right recurrent laryngeal nerve.

X-ray—There is displacement of the trachea to the left in the region of the lower cervical and upper dorsal vertebrae; no well defined mass is noted. In the region of C 5 and 6 there is a soft tissue swelling with an indentation on the posterior wall of the trachea in that area (see Figs. 1, 2).

Esophagoscopy—Swelling of the right lateral pharyngeal wall at the cricoid level. Right cord motionless, questionable bulging of the posterior tracheal wall. Esophagoscopy negative for mucosal lesion.

X-ray—(two days after admission). (Thin barium). The valleculae and pyriform sinuses bilaterally show no pathology.

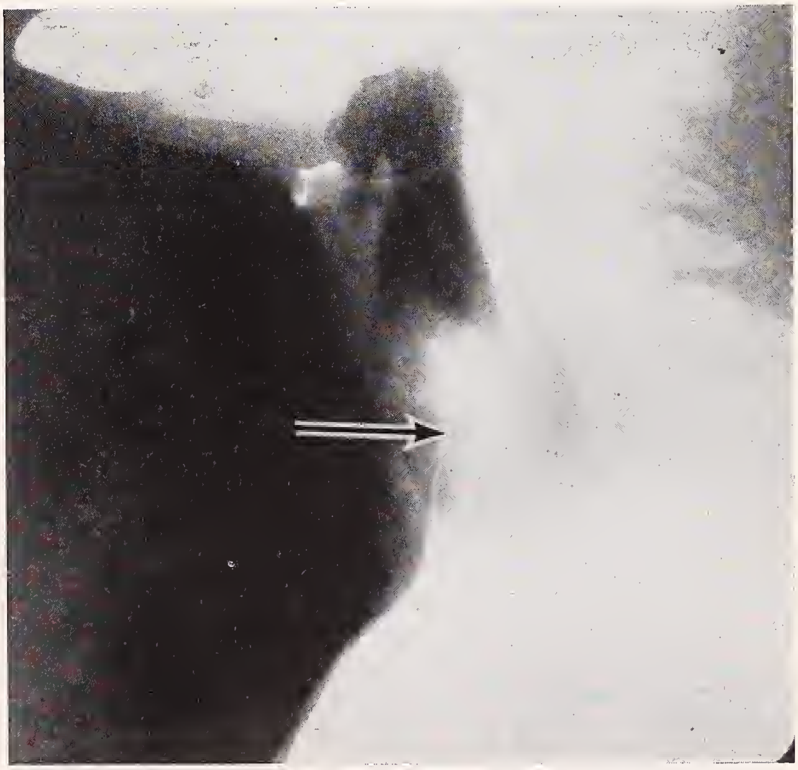


Figure IV

(V. W.) Retrocricoid soft tissue density, with some forward displacement of posterior wall of trachea. Compare with Figure II, postcricoid carcinoma.

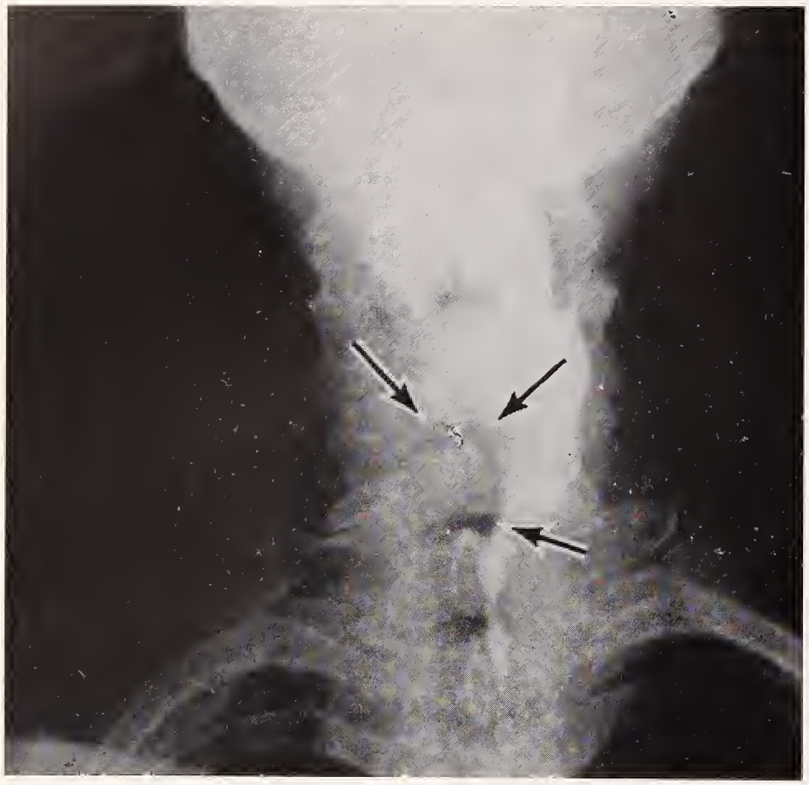


Figure V

(R.C.) Irregularly outlined soft-tissue density, with retention of barium in valleculae and left pyriform sinus. The soft-tissue density in the right pyriform sinus area is illusory, and represents the normal hypopharynx after completion of swallow. The opposite side, both hypopharynx and larynx are paralyzed.

The contrast medium appears to encounter an obstruction at the level of the junction of the pharynx with the esophagus beyond which no contrast medium is noted in the esophageal passage. There is a small amount of regurgitation of barium into the trachea, and this is noted in the over-exposed film in the left main bronchus.

X-ray Diagnosis—

1. Obstruction of proximal-most portion of esophagus.
2. Soft tissue mass opposite C 6.
3. Hypertrophic osteoarthritis of the cervical vertebrae.

ENT Consultation— (Two days after admission). Mirror examination revealed right vocal cord in a para-median position; voice husky; both vocal cords inflamed and swollen; probably foreign body, which has penetrated the mucosa and is causing peri-esophageal inflammation.

Over the next three days the patient gradually improved and was able to swallow a little fluid. There was less edema noted in mirror examination of the larynx; several large grayish brown masses were coughed up by the patient.

X-rays— (Six days after admission). There is failure to opacify completely the left pyriform sinus; however, under fluoroscopy this pyriform sinus appeared to be well visualized, and not remarkable in any respect. The trachea deviates to the left in region of C 6 and 7. There is a small trickle of barium into the esophagus; no evidence of filling defect.

X-ray diagnosis—Incomplete obstruction of the proximal esophagus, probably due to a central nervous system lesion or secondary edema.

Esophagoscopy— (Eleven days after admission); no foreign body or mucosal lesion found.

Diagnosis—Bulbar lesion (Vascular) involving Nerves X and IX.

After three weeks the swallowing had improved. The patient could take a liquid diet, and the final impression was that there was a vascular lesion localized in a very small area of the bulb, probably an embolus. As the patient's temperature was never over 99.2° rectally; urinalysis and blood picture normal, it is unlikely that infection was a prominent etiological factor here.

Follow-up—Two years later, this patient had a cerebrovascular accident with temporary paralysis of the left side from which he recovered. When check-up was attempted five years after the original admission he had moved to Florida. Voice was said by his son to be adequate, but slightly weak; he eats mostly soft food.

Discussion—The history, mirror examination, and the initial radiological examination in this case suggested a neoplasm of the upper esophagus or hypopharynx. The trachea deviated away from the side of the paralysis and was due in this case, not to pressure from a tumor situated in the hypopharynx, but probably to relaxation of the constrictor musculature attached to the right side of the larynx. The "edema" of the larynx seen on mirror and direct endoscopic examination probably represented relaxation and bulging of the atonic inferior constrictor muscle, and accounted for the soft tissue swelling behind the larynx on the lateral X-ray view. The grayish mass in the pyiform sinus was identified in this case as retained food (junket), in others as saliva and epithelial debris from the mouth.

Case II. R. C., 68-year-old woman, admitted with chief complaint of hoarseness and dysphagia, six months.

Present Illness—Six months ago the patient developed hoarseness over a period of a few days. Shortly thereafter she developed progressive dysphagia so that she can now take only soft foods and liquids. She has lost about 30 pounds over this period of time; has occasional regurgitation of food or liquid into the mouth; has a morning cough productive of yellow sputum.

Past History—Seven years ago, left mastectomy for a carcinoma without lymph nodes. One year ago right mastectomy, intraductal proliferation without malignancy.

Mirror Examination—Left cord is motionless and lies in paramedian position; patient is hoarse. There is a collection of saliva in the left pyriform sinus.

Physical Examination—Blood pressure 175/110. There is a 0.5 cm. nodule under the intact skin on the left in the scar of the mastectomy; it is firm and movable. Laboratory work showed no abnormalities of the blood or urine; Wassermann negative. There are no cervical or supra-clavicular lymph nodes palpable. The left shoulder droops noticeably and is limited in motion.

X-ray—Metastatic involvement of dorsal spine, L 3 and 4; left sacrum; left ileum and left ischium. Minimal fibrotic tuberculosis, right apex. Bilateral apical pleural thickening. Poor filling of the right pyriform sinus; no displacement of the barium-filled esophagus.

Diagnosis—Metastatic lesion involving the right pyriform sinus (see Fig. 5).

Endoscopy—No evidence of tumor in the hypopharynx or the upper esophagus. The lumen was patent and admitted an esophagoscope; left vocal cord motionless.

Impression—Bulbar lesion in region of nucleus ambiguus. Absence of upper mediastinal mass on X-ray with signs of Nerve X and XII involvement suggests central rather than peripheral lesion.

Discussion—The X-rays in this case show a failure of the right pyriform sinus to fill with barium. Absence of tumor in this area on endoscopic examination indicates that the right hypopharynx is the normal side and has emptied itself normally (see Fig. 5). The puddled saliva and residual barium in the left pyriform sinus is the result of atony of the pharyngeal musculature on that side. Fluoroscopy and the Valsalva maneuver after barium swallow demonstrate this vividly.

Case III. H. R., 68-year-old man, admitted with three-week history of hoarseness and dysphagia. Pre-admission roentgenograms had been interpreted as showing a "tumor of the hypopharynx" (see Fig. 6).

Endoscopy—The right vocal cord is slightly sluggish. There is saliva puddled in both pyriform sinuses and no evidence of neoplasm. Patient was discharged without further work-up.

Six weeks later he was re-admitted because of occipital headache of two weeks' duration. Four weeks prior to admission the patient had developed weakness of the left eyelid and left arm. On admission there was ptosis of the left lid, and a dilated, reactionless left pupil; spinal fluid was negative, sputum negative for acid-fast bacilli, WBC 12,000.

Neurological—Patient has a shuffling gait. There is evidence of involvement of Nerves III, IX, and X. Vibratory sensation and heat sensation are increased on the right.

Impression—Tumor of brain stem or metastases to brain stem from a primary tumor in GI tract or lung.

Mirror Examination—Complete paralysis of left vocal cord; puddling of saliva in left pyriform sinus.

X-ray—Ballooning of entire pharynx. Left vocal cord immobile. Ballooning of pharynx probably due to involuntary Valsalva maneuver each time the patient attempts to swallow.

Impression—Left sided bulbar paralysis with inability of the left pyriform sinus to contract, and immobility of the left vocal cord (see Figs. 6 and 7).

During the next six weeks the patient became rapidly worse, with progressive atrophy of the muscles of the neck, shoulder girdle, mandible and both upper and lower extremities. A diagnosis of amyotrophic lateral sclerosis was made before he died, although involvement of Nerves II and III was felt to be against it; autopsy was not obtained.

Discussion—Certain degenerative conditions involving the brain stem may be ushered in by dysphagia and hoarseness as a result of involvement of the nucleus ambiguus with resultant paresis of

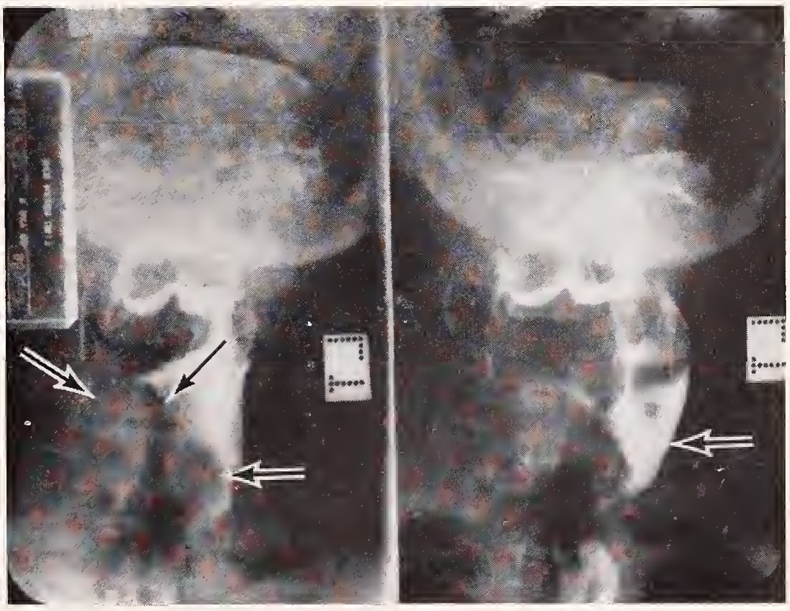


FIGURE VI

(H.R.) Film on left demonstrates the pattern which was originally interpreted as soft-tissue mass in right hypopharynx. Valsalva maneuver on right half of plate shows dilatation of left pyriform sinus, and strongly suggests paresis as the underlying disorder.

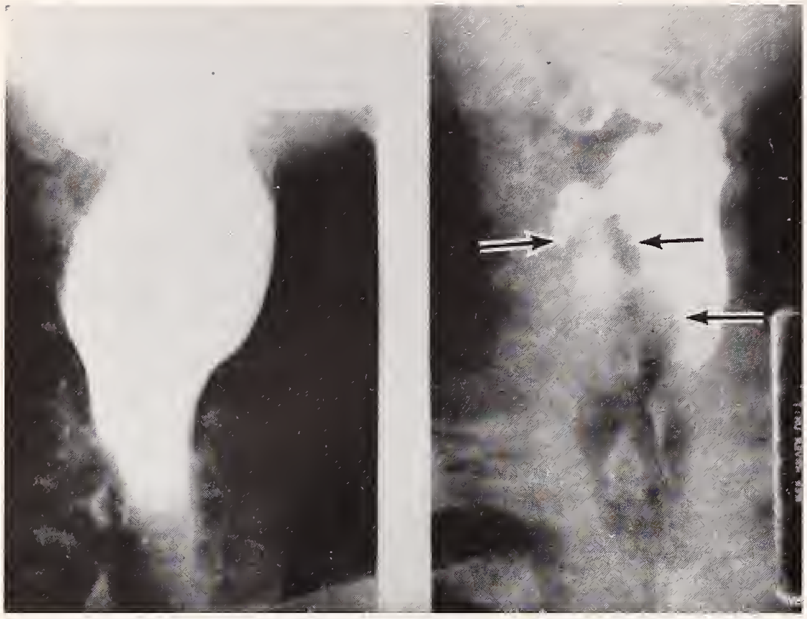


Figure VII

(H.R.) Barium-filled hypopharynx caught during fluoroscopy in supine position by spot-film (left) rules out a space-occupying mass in right hypopharynx as suggested by Figure 6, and by the right half of this plate. The latter shows the normally emptied right side of the hypopharynx immediately after completion of swallow, and further supports diagnosis of left-sided pharyngoplegia.

the constrictor muscles and vocal cords. Very little else may be found initially, even though weakness and asymmetry of the soft palate and posterior pharyngeal wall are carefully looked for.

Conclusion

Isolated pharyngeal paresis may simulate carcinoma of the hypopharynx (pyriform sinus and postcricoid area) because of similar findings on history, physical examination, mirror examination and routine roentgenograms with contrast media. Endoscopic examination having ruled out an intrinsic neoplasm, pharyngeal paresis can best be demonstrated by fluoroscopic comparison of the emptying-time of the two sides of the hypopharynx during barium swallow, preferably in the supine position, and by the demonstration of ballooning and asymmetry of the muscular walls of the hypopharynx during the Valsalva maneuver.

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A PRACTICAL GUIDE TO THE USE OF PSYCHOPHARMACOLOGICAL AGENTS IN GENERAL PRACTICE

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Despite the increasing frequency with which psychopharmacological agents are prescribed by the general physician, it is difficult for him to keep abreast of the new drugs, and to determine from the masses of literature distributed by the drug companies, simple indications for the safe and effective administration of these agents.

This paper attempts to translate the authors' personal experience with these drugs in the treatment of psychiatric patients into a practical, somewhat schematized guide for the management of commonly occurring psychiatric problems in general practice. The discussion is limited to a selected group of agents found valuable in the treatment of such cases. Three groups of drugs are discussed: tranquilizers (specifically phenothiazines and rauwolfia alkaloids), chlordiazepoxide (Librium), and antidepressants (specifically imipramine (Tofranil) and MAO-inhibitors), with special emphasis on dosage and administration, clinical indications, toxic manifestations and side-effects.

This paper attempts to offer practical suggestions for the management of commonly occurring psychiatric problems, with special emphasis on a selected group of tranquilizers and antidepressant drugs, the most commonly used of the newer psychopharmacological agents. We have limited our discussion to agents which in the authors' personal experience are most valuable in the treatment of common emotional disorders.

In order to simplify this presentation, we have to some extent schematized our clinical impressions. Such a schematic presentation must ignore some of the apparent exceptions, yet we hope that this approach will be helpful to the family physician to whom this paper is addressed.

Tranquilizers

To understand the effect of tranquilizers, it is useful to compare them with older sedatives such as barbiturates. Phenobarbital in small doses (gr. 1/4 t.i.d.) has for many years been given to patients experiencing mild discomfort, and it makes them tranquil without inducing sleep. When given to very agitated patients, however, the higher dosage required will induce drowsiness or sleep, thus impairing the patient's ability to function and participate effectively in psychotherapeutic and rehabilitational programs, diminishing the interaction between the patient and his environment, and increasing his withdrawal. In contrast, tranquilizers (which can also be described as sedatives), though they cause some initial drowiness (which disappears after 3-4 days use), only minimally impair alertness and over-all intellectual functioning. A patient given tranquilizers can easily be roused from a sleep which has been made possible for him by the sedation of the psychomotor agitation that may have kept him awake for several days, rather than by a specific hypnotic effect of the drug.

An important difference between tranquilizers and barbiturates, therefore, is the margin between their respective sedative and hypnotic effects. Tranquilizers suppress psychomotor agitation before inducing sleep so that these two effects are dissociated, whereas in the use of barbiturates, they occur simultaneously.[23]

Another important area of difference is the patient's acquisition of pharmacological tolerance to the drug. Since little or no tolerance to tranquilizers develops, therapeutically desirable dose levels may be maintained for long periods of time without loss of effect or habituation. One explanation for this phenomenon is that tranquilizing agents do not sedate in the pleasurable way in which traditional sedatives do. It is possible that since most tranquilizers act comparatively slowly, the immediate "lift" so typical of addicting drugs is absent and the patient does not become conditioned to expect an immediate sense of well-being following administration of the drug. Thus, the most important requisite for conditioning, a short interval between conditioning stimulus and response, is absent.

A clear definition of tranquilization is hard to find.[7] We use the term to describe a generalized calming effect in which the patient begins to interact with his environment, restlessness decreases, and social behavior becomes more integrated.[10]

We propose to discuss two groups of tranquilizers: the phenothiazines and rauwolfia. In our experience, propanediols such as meprobamate, though widely used, have not shown much advantage over traditional sedatives, and we find indications for their use doubtful.

Phenothiazines

The many phenothiazines now available fall clinically into three major classes, all of which were derived essentially from various modifications in the side chain of the phenothiazine nucleus. For the sake of simplicity, we shall discuss one representative of each of the three classes: chlorpromazine (Thorazine), perphenazine (Trilafon), and fluphenazine (Prolixin). Clinically they may be differentiated primarily in terms of their potency and the extent of their sedative effect, which appear to be inversely proportional. That is, the least potent, the one which is used in highest dosage, chlorpromazine, is the most sedative, while the reverse holds true for fluphenazine.

As with all drugs, dosage and route are an integral part of their indication for a particular condition, since the administration of different dose levels will cause different, frequently paradoxical effects. Therefore, discussion of their dosage and administration appropriately precedes discussion of their clinical indications.

Dosage and Administration. The therapeutically effective dosages vary from compound to compound. The preferred daily dose range of chlorpromazine (Thorazine), the least potent, is 300-800 mg. Since the more recently synthesized phenothiazines are 10-30 times as potent as chlorpromazine, dosage is correspondingly lower. Twenty-four to 40 mg. daily seems adequate for perphenazine (Trilafon), while more than 10 mg. daily of fluphenazine (Prolixin) is rarely necessary.

In emergency situations requiring rapid tranquilization, parenteral administration may be indicated. In such cases, it is well to remember that all agents affecting the central nervous system show increased effectiveness when absorption is faster and a large quantity enters the circulation at one time. As a simple rule, it can be said that regardless of which phenothiazine is used, 1/5-1/6 of the total daily dose given parenterally will be sufficient for the immediate control of the acutely ill psychiatric patient. Thus, using as models the previously mentioned drugs, the intramuscular dose will be 50 mg. for chlorpromazine (Thorazine), 5 mg. for perphenazine (Trilafon), and 2 mg. for fluphenazine (Prolixin). Although some of these drugs can be given intravenously, catastrophic hypotension has been seen frequently enough to discourage the use of this route, and intramuscular injection is preferable in most instances. Nevertheless, for rapid control of an acutely disturbed patient, 2½-5 mg. of perphenazine (Trilafon) seems to be safest for intravenous administration and has been given repeatedly without complications. When parenteral administration is indicated, it is advisable wherever possible to begin treatment with a small test dose, switching to the oral route as soon as feasible. The patient's agitation usually diminishes within a few minutes after intravenous administration, ½ hour after intramuscular administration, and about 1 hour following oral administration of these drugs.

During the first few days of therapy, the sedative effect is likely to be dominant and some drowsiness may occur. Within 3-4 days this disappears and the generalized calming effect called tranquilization may be seen.

Some authors recommend higher doses for greater therapeutic effect and expediency, but unless the patient is disruptive and requires "chemical restraint" for nursing reasons, we have seen no advantage from higher dose ranges. As mentioned above, true tolerance in the pharmacological sense does not develop with phenothiazines, though some symptoms occasionally become refractory if dose levels are increased too slowly.

A practical and simple way to titrate the patient is to use his ability to sleep at night as an end point. In this method ½ of the usual minimum daily dose is given in divided doses during the daytime, while 1/6 of the minimum daily dose is administered at 1 hour intervals during the night until he is asleep. Then the total amount (daytime and nighttime) he received before sleeping is computed and redistributed in 4 divided doses during the following day. For example, during the first day, the patient receives 50 mg. of chlorpromazine at 10 A.M., 4 P.M., and 10 P.M., then 50 mg. every hour thereafter until he falls asleep. Let us suppose that the patient required an additional 5 doses of 50 mg. each before sleeping the first night. The next day's dose will then be 400 mg. in 4 divided doses, plus 50 mg. every hour at night until he falls asleep.

This simple scheme using correspondingly lower doses with the more potent compounds permits a rapid attainment of effective therapeutic levels without necessarily reaching the very high dose ranges where side effects are more likely to appear.

Clinical Indications. The phenothiazines are very "popular" tranquilizers and have been recommended for a variety of disorders so wide that a perusal of the literature may lead to the conclusion that they are useful for almost every known psychiatric syndrome in alphabetical order — from anxiety to zoophobia. In general, it may be said that many of the so-called psychotic symptoms (psychomotor agitation, delusional ideation, hallucinations and withdrawal) respond to the phenothiazines, but results in neurotic disorders, except in acute episodes, are far from satisfactory.

Despite structural similarities among the representatives of the three major classes of phenothiazines, their differentiation in terms of their sedative effect (ranging from the most sedative chlorpromazine (Thorazine) through the moderately sedative perphenazine (Trilafon) to the relatively alerting fluphenazine (Prolixin)) appears constant in their effect on certain other forms of behavior. As a general rule, the more sedative compounds (like chlorpromazine (Thorazine)) are likely to be useful in alleviating restlessness or agitation, while the more alerting ones (like fluphenazine (Prolixin)) are most effective when uncommunicative behavior (delusional thinking, withdrawal, etc.) or confusion are the primary target symptoms. The intermediate group of moderately sedative phenothiazines represented by perphenazine (Trilafon) appears to be most effective when motor agitation is coupled with confusion and delusional thinking.

These considerations are the rationale for what we have found to be the most effective use of these drugs. Therefore, in terms of these effects we shall now discuss their use in specific psychiatric syndromes.

In psychoses where the primary symptoms are agitation and restlessness, as, for example, in toxic psychoses (e.g., following steroid administration or acute alcoholic excitement), metabolic psychoses (e.g., in hyperthyroidism or porphyria), or in hypomanic excitement, chlorpromazine is the drug of choice.[14]

In psychoses where the primary symptoms are withdrawal and uncommunicative behavior, as in catatonia and chronic schizophrenic reactions, fluphenazine (Prolixin) will be chosen.

For acute schizophrenic reactions in which motor agitation, delusional thinking and confusion coexist, perphenazine (Trilafon) is to be preferred. This is especially true because there is a relative absence of dangerous side effects, and the drug can be given parenterally in the initial phase of treatment virtually without complication. Some drowsiness is present in the first 4-7 days followed by the tranquilizing effect previously described, and the patient becomes more alert and communicative, although there is a selective suppression of restlessness and agitation.

In the majority of organic psychoses of diverse etiologies results are very satisfactory. The choice between a more sedative or more alerting phenothiazine will depend on whether the patient is overactive or withdrawn. The same holds true for senile conditions, though full remission of symptoms cannot be expected since irreversible changes in the central nervous system precede the development of behavioral symptoms.

In agitated psychotic depressions, phenothiazines given alone are of limited value. As the psychomotor agitation decreases, the underlying mood disturbance becomes increasingly evident. Used in small doses in combination with a primarily antidepressant drug, however, the phenothiazines may be quite helpful. This combination will be discussed later in the section devoted to antidepressant drugs.

As previously stated, despite widespread use of phenothiazines in neurotic disorders, we have found that they are likely to increase discomfort. This frequently takes the form of body-image changes and feelings of unreality approximating those seen in depersonalization. Thus they are not indicated for neurotic depressions or for phobic-obsessive or hysterical syndromes.[13] Indeed, hysterical patients seem to have a predilection for extrapyramidal symptoms.

In anxiety reactions, the outcome of treatment is unpredictable. For reasons which are not entirely clear and appear somewhat paradoxical, the "alerting" drugs such as fluphenazine (Prolixin) in very small doses (1-2 mg. or less daily) seem to be more promising for, and are better tolerated by anxious patients.

In certain character disorders where impaired impulse control is the dominant symptom, improvement following long-term administration of chlorpromazine may be dramatic even when everything else including long-term rehabilitation and psychotherapy has failed. In psychosomatic and psychophysiological reactions, phenothiazines given in small doses are equal or superior to other sedatives and tranquilizers, and the choice will depend on the associated or presenting symptomatology.

While it will be impossible for him to know each new drug, it may be useful for the clinician to become familar with one representative of each of the three groups, much as he knows one representative of each of the groups of cardiac glycosides.

Toxic Manifestations and Side Effects. These fall into a wide range and their significance varies. Lactation and polyuria are chiefly just "interesting." Nasal congestion and flushing are unpleasant. Various extrapyramidal symptoms are at times intolerable and may necessitate discontinuation of treatment. Leukopenia may be an important signal of damage to the hematopoietic system which is serious. Jaundice or other signs of liver damage are potentially dangerous, while neurocirculatory collapse may be fatal.

It is hard to distinguish, of course, between "toxic effects" and "side effects," but whatever we call them, an impressive number of reactions is attributed to these drugs. Practically none of the symptoms, however, are specifically associated with the use of any individual tranquilizer. Compounds that are quite different pharmacologically may have many side effects in common, and the difference between them lies mainly in the relative frequency of their occurrence. Individual sensitivity seems to play a major role, and patients who show reactions to one phenothiazine tend to show such reactions to other phenothiazines of the same class, though this is not constant enough to discourage a change of medication when indicated. This seems especially true for the "extrapyramidal" symptoms and possibly for other side effects as well. While none of the complications is strictly dependent upon dosage, certain toxic changes may be less reversible if large amounts are used over long periods of time.

Among the many complications, four groups deserve close attention and are listed in the order of their gravity.

1. Neurocirculatory collapse
2. Liver toxicity
3. Blood dyscrasias
4. Extrapyramidal symptoms

1. *Neurocirculatory collapse* with hypotension presents a serious medical emergency. For some reason, the effect of adrenaline is reversed when administered to a patient receiving phenothiazines with the result that the blood pressure continues to fall even further. Nor-adrenaline (Levophed) is most likely to maintain the blood pressure in an emergency but even this is unpredictable. Metamphetamine (Methedrine) 20-40 mg. or ethylphenidate (Ritalin) 10-20 mg. intravenously or intramuscularly may be helpful if everything else fails.[30] Although hypotension is a very serious matter, in most instances the patient will recover when placed in "shock position" and kept warm, since in the majority of cases the hypotension is of orthostatic character, apparently based on a disturbance of autonomic regulation. Recently, we have used an antiparkinsonian drug, benztropine methanesulfonate (Cogentin) 2 mg. i.m. with good results.

2. *Liver toxicity.* Liver damage, more frequent with less potent phenothiazines like chlorpromazine, appears to be of the cholestatic type in which jaundice may be seen relatively late.[25,28] Therefore, early detection is of paramount importance to prevent the development of a full-blown clinical picture. Some clinical signs may alert the physician: fever, itching, rash, meteorism, nausea, vomiting, belching, and right upper quadrant pain. Among the many liver function tests available, serum glutamic oxaloacetic transaminase activity, and alkaline phosphatase are the earliest indicators of such liver toxicity.[20,25] A continuous rise above the normal values is a definite indication to discontinue administration of the particular drug. Once jaundice has developed, the outcome depends largely on the extent of damage. In more serious cases, the administration of steroids may be a useful adjunct to other supportive measures and symptomatic care. Previous liver damage does not predispose to drug sensitivity and is thus no absolute contraindication to the initiation of drug therapy (except that superimposed hepatotoxicity may be harder to detect and even closer observation is required.) The prognosis is poorer when a blood dyscrasia coexists.[19]

3. *Blood dyscrasias.* A wide variety of toxic reactions may affect the hematopoietic system. Agranulocytosis may occur with and without hypoplastic anemia; leukemoid reactions may also be seen. A sore throat, pain on swallowing, or the appearance of sores in the mouth or throat may be the first symptoms of agranulocytosis. The most common warning signal is leukopenia which indicates a suppression of bone marrow activity. Preventive measures are mandatory and should include a white blood count and differential after one week and at monthly intervals thereafter. A white blood count which is normal but somewhat low does not necessitate withdrawal of the drug, but should immediately alert the physician to repeat the count at 3-4 day intervals. If the WBC continues to fall, the drug should be discontinued. Steroid therapy may be initiated[17] though there is no clear evidence that it markedly changes the clinical course.[29] Scrupulous oral hygiene should be maintained to prevent the formation of painful and serious ulcerations.

4. *Extrapyramidal symptoms.* Whereas hepatotoxic symptoms occur with greater frequency with the less potent, more sedative phenothiazines like chlorpromazine, the more potent, less sedative ones like perphenazine (Trilafon) and fluphenazine

(Prolixin) are more likely to cause extrapyramidal symptoms. Although the drug companies routinely supply information on these side effects, it is by no means an easy task to recognize them. The wide variety of extrapyramidal symptoms deserves attention because they are distressing and can by their very nature contribute to the development of somatic delusions. Some of the symptoms are bizarre. Dystonias may occur, especially in the neck muscles which may be spastic and painful. Torticollis is not infrequent. At times, rigidity of the back muscles, together with neck symptoms, progresses to opisthotonus. Trismus, pill-rolling movement of the hands, protrusion of the tongue, oculogyric crises, and difficulty in swallowing may occur alone or in various combinations with the symptoms previously described. Sometimes motor restlessness and tremor are the only presenting symptoms, and the patient becomes hyperactive despite the fact that these drugs are used to reduce psychomotor agitation. In a few instances, parkinsonian rigidity is manifested to the point where an erroneous diagnosis of a catatonic episode is made.

In some cases, the patient becomes not only hyperactive, presenting a typical syndrome of akathisia (literally, an inability to sit down: the patient paces, moves hands and especially feet constantly), but there is also an apparent exacerbation of his original illness—old symptoms recur, and even new symptoms may appear. Occasionally this presents itself as a superimposed toxic delirious condition with somatic delusions and confusion, which, if misinterpreted as an indication for increasing the dose, is of course followed by further deterioration. Such mistakes can usually be avoided by parenteral administration of a fast-acting antiparkinsonian drug (e.g., benztropine methanesulfonate (Cogentin) 1-2 mg. i.m.). Improvement is generally noticeable within 30-60 minutes, but if not the dose may be repeated. The patient reports lessening of discomfort, motor symptoms subside dramatically, and confusion usually clears. An even faster way to make the correct assessment, particularly in differentiating torsion spasm, oculogyric crisis and generalized rigidity from the true catatonic state, is to inject 25-50 mg. diphenhydramine (Benadryl) intravenously. Symptoms will disappear or diminish markedly within 10-15 minutes. Further management obviously will have to depend on the patient's original condition. Should it be desirable to maintain relatively high dose levels, an antiparkinsonian drug may be added to control side effects.

In less dramatic situations, for the management of parkinsonian symptoms, either benztropine methanesulfonate (Cogentin) 1-2 mg. or diphenhydramine (Benadryl) 50 mg. may be given orally 2-3 times daily; in some cases a combination of these two drugs will be found helpful. Whenever possible the dose of phenothiazine should be reduced if this can be done without sacrificing the clinical improvement already obtained with higher doses.

Special attention should be paid to these effects in children, who seem particularly prone to extrapyramidal symptoms.[12]

Generally speaking, the less sedative the phenothiazine, the less likely it is to cause liver or hypotension. While the decreased toxicity of these newer agents to the hepatobiliary system and the relative absence of hypotension are most welcome achievements, these drugs have, on the other hand, a much greater incidence of extrapyramidal symptoms. The fact that these manifestations can be successfully controlled by antiparkinsonian agents, renders their administration more convenient. Still, this does not exclude the possibility that these symptoms may reflect irreversible histopathological changes in the central nervous system.

The more sedative drugs (such as chlorpromazine) and to some extent, other tranquilizers, may have a potentiating effect on many central nervous system depressants, especially narcotics and certain anesthetics. This is less true of the more "alerting" drugs (like perphenazine, and especially fluphenazine). This "synergistic" action may be exploited therapeutically where prolonged analgesia is required (as in combination with morphine in terminal cancer),[27] on the other hand, such potentiation may also give rise to new syndromes when phenothiazines are combined with other agents. For example, those tranquilizers which lower the threshold for convulsions, may have this property increased in combination with certain other drugs. We have, for example, seen a patient who has had repeated grand mal attacks following the combined administration of steroids and chlorpromazine.

In addition to these signs, there is a great variety of subjective symptoms. These are difficult to evaluate since both neurotic and psychotic patients tend to "somatize" their emotional problems. Complaints of atropine-like effects are also seen, especially dryness of the mouth and blurring of vision. These of course do not call for emergency measures.

Difficulties may also arise from the fact that phenothiazines (especially the more sedative types) may produce hypothermia and the patient may not be febrile in spite of an intercurrent acute infection. On the other hand, drug sensitivity is occasionally manifested by a high fever not due to an infectious agent: the elevated temperature together with some other finding such as leukopenia may be quite misleading.

Rauwolfia Alkaloids

Rauwolfia alkaloids are used widely in medicine and have gained recognition as relatively non-toxic and helpful drugs in the therapy of hypertensive

TABLE I

PHENOTHIAZINE CLASSIFICATION SYSTEM

CHARACTERISTICS	I. SEDATIVE chlorpromazine (Thorazine)	II. INTERMEDIATE perphenazine (Trilafon)	III. ALERTING fluphenazine (Prolixin)
Potency	+	++	+++
Antidelusional and interactional alerting effect	+	++	+++
Extrapyramical symptomatology	+	++	+++
Effect on psychomotor agitation and restlessness	+++	+++	+
Hepatotoxicity	+++	+	+?
Potentiation of central nervous system depressents	+++	++	+
Hypotension	+++	+	+
Other drugs which exhibit most of the above characteristics:	promazine (Sparine) mepazine (Pacatal) thioridazine* (Mellaril)	prochlorperazine (Compazine) triflupromazine (Vesprin) methoxypromazine (Tentone) thiopropazate (Dartal)	fluphenazine (Permitil) trifluoperazine (Stelazine)

*Alleged low incidence of liver toxicity and extrapyramidal symptoms, but retinopathies have been reported.

disease. In contrast to phenothiazines where there is reasonable agreement among many investigators as to where and to what degree they can be useful in the management of psychiatric patients, these alkaloids with the romantic name of "snakeroot" are the subjects of most violent disagreement. At present only a very few psychiatrists use these drugs, although occasionally favorable reports still appear.[4]

In 1955, Detre and Bernstein,[6] pursuing observations made by Barsa and Kline[3] on peculiar characteristics of this drug, drew up an action profile showing the effect of reserpine in temporal sequence. Usually after a relatively short sedative phase (12 days with oral, 6 with parenteral administration), the patient becomes agitated and has nightmares. A few days later the dreams begin to overlap into the wakening stage causing hypnagogic-like phenomena. Patients are usually restless in the early morning hours but become calm late in the day. The nightmares become extremely vivid, impress the patient as real and wake him repeatedly during the night. After approximately three weeks of therapy, dream activity slowly decreases and daytime anxiety increases, and a strange reactivation of earlier symptoms begins, accompanied by mood changes which may be either depressive or hypomanic in character. This is a transient phase in all instances and it may last anywhere from 3-6 weeks. Despite these difficulties, however, in our experience the signs of reactivation, and the occurrence of nightmares speak for an eventually favorable response to the drug.

The sequences described obviously reflect important neurophysiological events even though the explanation for these can only be hypothetical at present. Internists have long observed that oral or parenteral administration of reserpine lowers blood pressure only temporarily. Thereafter the blood pressure returns to its previous level, but will appreciably lower again after 3-6 weeks of treatment. It has been noted that epileptic patients who received reserpine for behavior disorders had more seizures following the third or fourth week of treatment even though they were symptomatically well-controlled prior to the administration of the drug, and that after about six weeks many patients required smaller amounts of anti-convulsants to remain symptom-free.[2]

Dose and Administration. There are two forms of reserpine treatment: low-dose ambulatory treatment, and high-dose hospital treatment. The dosage ranges from 0.4-1.0 mg. daily administered orally for ambulatory patients. In the acute phase of psychotic illness, with the patient hospitalized, the dose may be as high as 20 mg. daily. Blood pressure should be taken daily both prophylactically and as a guide to the patient's course. Once the turbulent phase is over, however, the patient can be discharged on a dose of 2-3 mg. daily. Reserpine is especially well suited for maintenance therapy as it causes no liver damage and practically no laboratory control is necessary. Periodic white blood counts and hematocrits, are, of course, still advisable for any patient receiving prolonged drug therapy.

Clinical Indications. Reserpine in high (10-20 mg. daily) doses, is often very useful in schizophrenic reactions, especially in the catatonic or hebephrenic sub-types, but the stormy course of reserpine treatment limits this use to hospitalized patients.

In ambulatory patients, reserpine in small doses should be used under close observation. For anxious patients, 0.1-0.25 mg. four times a day is often very helpful, but it must be remembered that full therapeutic benefits are rarely experienced before 3-6 weeks of treatment. Recently, we have had excellent results giving such patients reserpine in combination with chlordiazepoxide (Librium) (which has a mildly antidepressant effect). An interesting reaction is an enormous increase of appetite, often useful in the management of anoretic patients, especially in children who show negativistic behavior.

Toxic Manifestations and Side Effects. Reserpine is well tolerated by the majority of patients. While there are a number of side effects described and attributed to reserpine, only a few of them are disturbing or require special attention. Nasal stuffiness is most frequent but it is likely to disappear after a few weeks of treatment. Symptomatically, a nasal constrictor such as ephedrine can be used, or diphenhydramine (Benadryl) may be added in small doses (25-50 mg. p.o.) 2-3 times a day. Hypotension with bradycardia is usually transient in normotensives and, unless the patient has cardiovascular problems, a systolic blood pressure of 80-90 and a pulse rate of 50-60 need not be alarming. Extrapyramidal side effects are usually mild although akathisia may occur. Gastrointestinal discomfort and reactivation of peptic ulcer have also been described.[22] Reserpine has been reported to precipitate a depressive reaction even in small doses,[11] but the addition of an antidepressant drug (for example, imipramine (Tofranil), 25 mg. t.i.d.) for the first few weeks of treatment may prevent its occurrence in patients with a previous history of depressive illness, or control it symptomatically once it is manifest. It should be re-emphasized, however, that there is no clear-cut evidence that a depression can be caused by reserpine treatment unless the patient is predisposed. It is more likely that the presenting symptoms mask an underlying depression which becomes manifest following the administration of this drug.

Chlordiazepoxide (Librium)

This is a drug which may be classified in an intermediate position between the tranquilizers discussed above and the antidepressants which will be described below. Although in very high doses (150-300 mg.) chlordiazepoxide (Librium) may have a "tranquilizing" effect, it is not intended for the treatment of major psychoses. At a dose range of 30-40 mg. daily it does have, however, a mild euphorizing, antidepressant action and muscle relaxing properties.

In contrast to most of the other drugs, it acts very rapidly, and increased comfort is reported by patients 30-40 minutes following oral administration of the drug. Parenteral administration gives no faster response but facilitates its use with uncooperative patients.

In agitated depressions, when combined with one of the antidepressants, chlordiazepoxide (Librium) frequently provides excellent and almost immediate symptomatic relief, reduces agitation, stimulates appetite, and allows the return of normal sleep. Patients who suffer from acute anxiety attacks also seem to benefit from this drug.

Alcoholic patients were made more comfortable with Librium in the period of withdrawal,[26] perhaps because of its muscle relaxing and appetite stimulating effects. Since it does not induce sleep, it may have a distinct advantage over the older sedatives for alcoholics where alimentary intake should be maintained for hydration and nutrition.

Toxic Manifestations and Side Effects. At the recommended dose levels of 30-40 mg. daily it has had few, if any side effects, although we have occasionally seen some hypotension (especially in older patients), and in two instances, a cerebellar type of ataxia. When using chlordiazepoxide (Librium) in higher dose ranges, caution is recommended, as severe hypotension or ataxia appear in at least 50% of patients. Recently, convulsions were seen in a few patients from whom the drug was suddenly withdrawn. In behavioral disorders associated with temporal lobe epilepsy, administration of chlordiazepoxide (Librium) has occasionally been seen to cause a confusional type of psychosis with increased seizure activity demonstrated on an EEG. Therefore, the relationship of this drug to seizure disorders will require further careful investigation.

Antidepressants

The two groups of antidepressants we use will be discussed together:

1. *Imipramine (Tofranil).* While phenothiazines cause a diminution of motility, especially by controlling hyperkinesis, imipramine, structurally related to the phenothiazines, stimulates motility instead of depressing it, and has an euphorizing effect.

2. *Monoamine-oxidase inhibitors.* Iproniazid (Marsilid) is the first and best known prototype of the so-called MAO inhibitors, but its use has been almost completely abandoned because of severe liver toxicity. At present, almost every pharma-

ceutical company markets such a drug, and claims of lesser toxicity are routinely advertised. It seems, however, that in most instances the reduction of toxic effects is associated with a lessened potency of the drug. In our experience, isocarboxazide (Marplan) seems to approximate iproniazid (Marsilid) in therapeutic action and potency, and to be relatively well tolerated thus far. While liver toxicity has not been reported in its two years of use, confirmation of its absence must await longer observation.

Dosage and Administration

1. Imipramine (Tofranil): Although many dose schedules have been proposed, the simplest is administration of a single test dose of 50 mg. the first day followed by 50 mg. three times daily thereafter. If the patient's mood lifts within the first week, this dose is maintained until full remission is obtained, then gradually reduced. Should there be no improvement within a week, the drug may be slowly increased to 200 or even 300 mg. daily in divided doses, and the therapeutic trial continued for another 10 days. Recently, imipramine became available in parenteral form, and may be given intramuscularly in similar doses to patients who refuse oral medication. It is our experience that patients who respond show noticeable changes within 2-3 weeks. This is true in 2/3 of patients, while in the remainder, other types of organic treatment must be tried.

2. Isocarboxazid (Marplan) is administered orally. The daily dose is 30-40 mg. in 3-4 divided doses. This can be reduced to a maintenance dose of 5-10 mg. as soon as remission of symptoms begins (usually after 3-6 weeks of treatment).

Clinical Indications. A sizeable number of patients seen in general practice suffer from some sort of depressive reaction. The classical symptoms (anorexia, insomnia, constipation, anxiety, psychomotor agitation or retardation, and apathy), are often seen together. Frequently, however only one or two of the symptoms are present. "Masked" depressions with primarily somatic complaints are well known in the "menopausal" and "involutional" group, but they are also not rare in children and younger adults, even though we are less inclined to consider the diagnosis of depression if the age of the patient is not "typical."

Whether the depression is "primary" or "secondary", "reactive" or "endogenous", is mainly of theoretical interest since the patient's discomfort may be as great or greater in the "secondary" depressions as in the "endogenous" ones. Furthermore, the "reactive" nature of the condition is no guarantee of an early spontaneous remission. Any of the antidepressant drugs may be used, and the likelihood of some therapeutic benefit is fairly good. Although it is hard to determine whether the addition of a drug is preferable to psychotherapy alone, a good practical rule is to consider the patient eligible for drug treatment when his complaining is persistent and there is increasing insomnia and anorexia. If the depression is obviously mild and the patient is still functioning, up to 100 mg. daily of chlordiazepoxide (Librium) may provide considerable symptomatic relief. In the absence of improvement, however, an antidepressant agent should be added. In more severe depressions, one of the specifically antidepressant drugs should be used initially.

It has been observed that antidepressant agents are frequently helpful in what appear to be anxiety reactions, a response which may be explained by the fact that anxiety is often a precursor of depressive disease. It is important to remember, however, that both depression and anxiety may be the signs of an incipient schizophrenic reaction.[5] In this case, the symptoms would not only fail to respond to antidepressants, but the patient's condition might rapidly deteriorate. While the reasons for this are not altogether clear, well-documented reports[24] must caution the clinician against indiscriminate use of antidepressants.

Opinions are divided as to which antidepressant agent is preferable when extremely rapid action is desirable or mandatory. Some clinicians feel that imipramine is to slow to be used routinely in severe psychotic depressions and express preference for the MAO inhibitors. We have seen little to support the view that MAO inhibitors produce faster symptomatic improvement than does imipramine. However, patients who have not responded to imipramine may still remit on one of the MAO inhibitors, or vice-versa. MAO inhibitors are particularly recommended for patients with coronary disease as they are better tolerated.

No matter which drug is chosen, it is best to give 1/3 of the recommended daily dose as a test dose the first day, preferably in the doctor's office, with a re-examination of the circulatory status 1 hour later. Beginning the next day, the patient can be kept on the recommended full dose, with brief re-examinations at 2-3 day intervals.

Toxic Manifestations and Side Effects. Side-effects are relatively few, and these drugs are well tolerated by the majority of patients. Both groups of antidepressants are potentially toxic to the liver and may cause severe hypotension. The side effects associated with the use of phenothiazines may also occur, but usually to a lesser degree. Occasionally, clinical improvement is preceded by a transient deterioration characterized by increased delusional thinking and psychomotor agitation. There are even suggestions in the literature[21] that the risk of suicide increases as severe depression lifts, and patients should be watched closely in this phase of treatment. This "activation" is neither a bad sign nor an indication to decrease or withdraw the medication. The patient is in acute distress, however, and may be made comfortable by adding a small dose of chlorpromazine (25 mg.) or chlordiazepoxide (Librium) (10-20 mg.) 3-4 times daily.

The management of hypotension is the same as described in the section on side effects of phenothiazines except that pressor amines may be used more liberally since the paradoxical effect described when they are used with phenothiazines does not occur. Antidepressants, however, are more frequently administered to middle-aged and older patients in

Table II
Indications for Drug Use

INDICATION	DRUG	DOSE
1. Toxic and metabolic psychoses (following steroids, acute alcoholic excitment, hyperthyroidism, porphyria, etc.)	chlorpromazine (Thorazine)	300-800 mg/day
2. Hypomanic excitement	chlorpromazine (Thorazine)	300-800 mg/day
3. Functional psychoses:		
a) catatonic reaction	fluphenazine (Prolixin)	3-20 mg/day
b) chronic undifferentiated schizophrenic reaction	fluphenazine (Prolixin)	3-20 mg/day
c) hebephrenic reaction	reserpine	10-20 mg/day
d) acute schizophrenic reactions (paranoid, schizo-affective & acute undifferentiated)	perphenazine (Trilafon)	24-40 mg/day
e) agitated psychotic depression	chlordiazepoxide (Librium)	10-20 mg/t.i.d.
	plus isocarboxazide (Marplan)	20-60 mg/day
	or	
	chlordiazepoxide (Librium)	40 mg/day
	plus imipramine (Tofranil)	150-300 mg/day
4. Organic psychoses	see text	
5. Senile psychoses	see text	
6. Alcoholic withdrawal	chlordiazepoxide (Librium)	30-60 mg/day
7. Neurotic disorders	drugs generally not helpful	
depressive reaction		
phobic-obsessive reactions		
hysterical syndromes		
8. Anxiety reactions	reserpine	0.4-1.0 mg/day
	or	
	chlordiazepoxide (Librium)	30-40 mg/day
	or	
	reserpine	0.4-1.0 mg/day
	plus chlordiazepoxide (Librium)	30-40 mg/day
	or	
	fluphenazine (Prolixin)	1-2 mg/day
9. Character disorders with impaired impulse control	chlorpromazine (Thorazine)	400 mg/day
10. Psychosomatic and psychophysiological reactions	see text	
11. Depression	imipramine	150-300 mg/day
	or	
	isocarboxazid (Marplan) *	20-60 mg/day
11 (a). To counter agitation in patient on antidepressant drug	chlordiazepoxide (Librium)	10-20 mg. t. i. d.
	or	
	chlorpromazine (Thorazine)	25 mg. t.i.d.-q.i.d.
12. To differentiate between catatonia and parkinsonism	methanesulfonate (Cogentin)	1-2 mg. i. m.
	and/or	
	diphenhydramine (Benadryl)	25-50 mg. i.v.
13. Parkinsonian symptoms and other extrapyramidal syndromes	diphenhydramine (Benadryl)	50 mg. b.i.d.-t.i.d.
	and/or	
	methanesulfonate (Cogentin)**	1-2 mg. p.o. b.i.d.-t.i.d.
14. For emergency tranquilization	perphenazine (Trilafon)	5 mg. i. m.

* See Table III.

** See Table IV.

Table III

Iproniazid (Marsilid)
Isocarboxazid (Marplan)
Pheniprazine (Catron)
Phenelzine (Nardil)
Trancylpromine (Parnate)

whom depressions requiring pharmacotherapy are more common, hence the patient's cardiovascular condition must be carefully evaluated and followed. It is best to reduce the dose, even at the expense of clinical improvement, if the patient tolerates the drug poorly and his blood pressure falls. An electrocardiogram should be repeated in doubtful cases, especially if the blood pressure falls precipitously or cardiac arrhythmia is noted. This latter finding may occur with the use of imipramine.

A somewhat puzzling but valid clinical observation is that optimal response to imipramine can be predicted in those patients who complain most of unpleasant side effects on the second or third day of treatment. Imipramine is known to have atropine-like action, but it is difficult to explain why dryness of the mouth and blurred vision correlate so closely with predictable therapeutic response.

In addition, the MAO inhibitors may produce an unusual peripheral edema which is frequently unilateral and localized in a lower extremity. Elevation of the feet relieves this transient condition. Defects in memory for recent events have been reported following the use of MAO inhibitors. These cleared up within a week following discontinuation of the drug.[16]

General Discussion of Pharmacotherapy

We have discussed above some drugs which we have found valuable in the treatment of emotional disorders. Their increasing use has created an optimistic climate in modern psychiatry which is partly justified. Undoubtedly, many patients who were previously inaccessible to therapeutic interaction and required long-term hospitalization may now survive on the outside while receiving treatment.[1] It seems to be reasonably well documented that the appropriate use of these new agents may selectively modify certain aspects of the presenting clinical picture with considerable benefit to the patient.

It must be emphasized, however, that drug treatment is directed to symptoms, and not to etiology. It does not resolve conflicts that are either causative in the disease process, or that result from the effect of the patient's illness on the environment. The greater accessibility of a large number of patients demands of the physician a good deal of skill and experience, not only in terms of the pharmacological management of the patient's treatment, but also in terms of the psychological management. There has, for instance, been a rather impressive increase in the number of attempted suicides in depressed patients who are now usually treated as outpatients, away from careful hospital supervision. Furthermore, some of these very effective drugs are potentially very toxic, and unless the choice of treatment and the patient's over-all situation are carefully considered, serious or fatal consequences may ensue.

Table IV

ANTIPARKINSONIAN AGENTS

Biperidan (Akineton)
Benztropine methanesulfonate (Cogentin)
Diphenhydramine (Benadryl)
Ethopropazine (Parsidol)
Trihexyphenidyl (Artane)

After an initial, thorough evaluation of the patient, the physician must decide whether he will continue to treat the patient, whether he will request psychiatric consultation, or whether he will hospitalize the patient.

What factors should the physician consider in deciding whether to continue seeing the patient outside the hospital? In general, the best indications for outpatient care are that the patient functions with reasonable social effectiveness despite perhaps considerable subjective discomfort, that his sleep and appetite are reasonably well preserved, and that there are no indications of severe perceptual disturbances or delusional thinking.

Whether or not the family doctor will treat the patient with the aid of a psychiatric consultant depends on his own personal comfort in dealing with the patient, as it does in all other conditions where the question of consultation arises. As in non-psychiatric conditions, the physician's discomfort is reflected to the patient, thereby decreasing his effectiveness and augmenting the patient's discomfort. Needless to say, suicidal or destructive tendencies in the patient make consultation with a specialist mandatory. Difficult situations will arise, however, where the patient or his family simply refuses to consult a psychiatrist, and where the physician's tact and skill will be invaluable in handling the situation effectively to assure proper care for his patient. This is especially true in psychiatric emergencies where the patient's behavior has created considerable social embarrassment and where the doctor must avoid being induced or coerced into assuming responsibility when he is not in a position to do so. In occasional cases he must override the unwillingness of the family, stating clearly his ethical position: that he will not abandon the family in such an emergency, but that his only appropriate function is to make proper arrangements for treatment.

Obviously, in such emergencies administration of a drug is indeed indicated which may alleviate the immediate dangers and facilitate appropriate referral. Since in most of these instances the presenting symptoms are agitation and/or disruptive behavior, parenteral administration of perphenazine (Trilafon) (5 mg. i.m.) is a frequently useful measure.

Besides the strictly diagnostic considerations, an evaluation of the patient's environment and its interrelationship with his condition will be a decisive factor in the physician's decision. To use a practical example: a patient in a severe reactive depression with suicidal thoughts can probably be treated at home (after psychiatric consultation) with an antidepressant drug if the patient is cooperative enough to take the medication, and if the family is willing to offer close supervision during the critical period, which may last anywhere from 1-3 weeks. On the other hand, it would be unduly risky to undertake the ambulatory care of such a patient if his condition persisted long enough to exhaust his environment. In such a situation it would be more sensible to consider hospitalization for the patient and some rest for the family. Some estimation of the amount of medication actually taken by the patient may be made by testing the urine.[8,9,18]

For those patients whom the physician decides to treat pharmacologically, some arrangement must be made for careful evaluation of the continuing over-all situation, and for supportive psychotherapeutic care. While the physician may decide to assume these responsibilities personally, he may prefer to work with psychiatrists or specialized community agencies while continuing to direct the patient's medical management.

Once such evaluation and arrangements have been made, the appropriate drug must be chosen. The selection of the "proper" agent will depend both on the patient's presenting symptomatology and his over-all physical condition. Regardless of the psychiatric diagnosis, for example, one would not give a drug which is likely to cause severe hypotension to a patient with coronary artery disease. Reference has been made to the fact that practically all of these drugs have numerous side effects requiring repeated and careful clinical evaluation. Hence, thorough familiarity with the patient and with the drug is the best guarantee of the comfort of both patient and doctor, As previously mentioned, however, many symptoms may emerge during drug treatment which are wholly unrelated to the particular drug employed, and which merely reflect the patient's emotional distress.

Although the time required for symptomatic improvement is by no means uniform, relief is rarely immediate, and depends somewhat on the drug administered. For example, it may take up to three weeks before a MAO inhibitor effectively lifts the patient's mood, 4-7 days until one of the phenothiazines achieves tranquilization with suppression of some of the disturbing symptoms, and only a few hours until the anti-anxiety effect of chlordiazepoxide (Librium) is experienced. The knowledge of the drug, and of the time element, as well as the patient's subjective reporting of comfort, are the clinician's best guides to regulating the dosage. Once treatment has begun, the dose should not be manipulated until sufficient time has elapsed to gauge clinical improvement. Increasing the medication above the recommended dose ranges is not only dangerous but rarely improves the likelihood or speed of symptomatic improvement.

Certainly, drugs are no substitute for relationships, and the patient needs the personal attention of his physician. This means that during the acute phase of the illness, the physician should see the patient several times a week. This procedure will not only increase the patient's comfort, but will secure the cooperation of both the patient and his family.

Opinions are divided on the advisability of discontinuing drug treatment more or less abruptly as opposed to keeping the patient on maintenance medication. Evidence is accumulating to the effect that even after satisfactory improvement is seen abrupt withdrawal significantly increases the chance of relapse.[15] Since there is no evidence that drug treatment abbreviates the actual course of the disease, continued maintenance therapy is advisable for some time following the remission of symptoms or the resolution of the distressful situation. While the total length of treatment varies in the individual case, patients who respond favorably to outpatient therapy usually require an average of 4-6 weeks on full dose schedules. This may be accomplished by bi-monthly follow-up visits at each of which the medication is reduced by about 1/4.

The evaluation of the patient on follow-up visits is problematical. Re-occurrence of symptoms following a reduction of the dose may be entirely due to "pharmacological" reasons, i.e., the patient receives an insufficient amount of the drug which previously relieved his symptoms. At such times, reinstitution of drug treatment may be all that is required. On the other hand, withdrawal of the drug may indicate to the patient that the support he received from his physician will terminate in the forseeable future should his improvement continue, and he finds complaining the only acceptable way to present his need for further support. In such cases, it soon becomes obvious that the patient needs specialized care. Prompt referral to psychiatric treatment is especially indicated when, in spite of a satisfactory remission of the presenting symptoms, the patient is acutely uncomfortable. Quite frequently a new set of symptoms appears. A tactful inquiry will help to clarify the issue and suggest the proper course of action.

We have attempted to give some guideposts to family physicians in regard to the pharmacological management of psychiatric illness. Even with some guideposts the effective use of psychorpharmacologic agents poses many problems for the family physician. From the inquiries we have received and from the patients we have seen, it is our subjective impression that in many cases heroic attempts to treat the patient without psychiatric consultation fail, and the patient must eventually be hospitalized. Nevertheless, it is a reality that non-psychiatric physicians *do* use such drugs, and it is important that they be well informed, particularly since many patients will not consider consulting a psychiatrist, and psychiatrists are often not available for emergency consultation. Even when the physician does refer his patient to a psychiatric consultant or to a hospital, it is well that in his role of family advisor he be informed as to the rationale and indications for the treatment given his patient.

An increasing familiarity with the tools and the problems of psychiatric treatment on the part of the family doctor, and an increasing awareness on the part of psychiatrists of the psychiatric problems which the family doctor encounters in his patients, should lead to increased communication between members of the two disciplines. This will be of substantial benefit to the community and may help to bridge the half-century of separation between psychiatry and medicine.

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The names and addresses of the manufacturers of the drugs mentioned in this article are listed below:

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ACUTE SOLITARY CECAL DIVERTICULITIS

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A review of the literature of acute cecal diverticulitis was stimulated by the writer's experience with two consecutive instances of pre-operatively diagnosed cases of acute appendicitis which in retrospect were acute solitary cecal diverticulitis.

Diverticulitis of the cecum is not a common entity judging from the literature and less common is the establishment of the preoperative diagnosis. If the diagnosis of acute cecal diverticulitis is not established, by far and large the most common preoperative diagnosis is acute appendicitis or one of its complications. Ruptured carcinoma of the cecum has been erroneously considered to the extent that in a reported series of 153 cases, 59 cases were treated by radical resection of the right colon, cecectomy, or ileocecal resection. Of these 57 patients 39 were operated upon with a mistaken diagnosis of malignancy and the overall mortality rate was 10% (1). Understandably, in such management based on erroneous gross pathological impressions, morbidity and mortality are greater than in those cases in which the correct diagnosis is established and in which a lesser procedure is carried out. Regional ileitis, actinomycosis, tuberculosis and nonspecific ulcers are to be considered also in the differential diagnosis. Grossly these lesions may be recognized if they are thought of. Carcinoma is the most important lesion to differentiate but the difficulty in diagnosing carcinoma from a granulomatous lesion explains why a large percentage of reported cases of cecal diverticulitis undergo hemicolectomy. Frozen section may be helpful. If there is a history of previous appendectomy then perhaps one may be allowed more time for consideration of other lesions and in the meantime institute such supportive measures as may favorably influence the pathogenesis of the disease.

Acute solitary cecal diverticulitis was first reported by Potier in 1912. In 1940 Jonas reported 15 cases and added 5 cases of his own; and in 1947 Anderson reported 91 cases and added 8 cases. Up to 1956, 149 cases in all have been reported in which the correct diagnosis was established in only 6%.[3] The disease usually occurs in the fourth decade and there is a two to one selectivity for male over female. The incidence of solitary cecal diverticulitis is between 1% and 2% of the variable 5% to 33% reported incidence of diverticulosis of the colon as a whole.

Of interest in these two following cases is the difference in their surgical management as dictated by the impression given by the gross pathology.

Case I. Mrs. R. L., a thirty-nine year old white woman was admitted to the hospital complaining of right lower quadrant pain of one day's duration associated with anorexia and nausea without vomiting. Her immediate past history was one of interval episodes of indigestion and intolerance to fried and fatty foods and long standing constipation. She denied ever having had any previous definitive right lower quadrant pain. Her temperature was 100.6 on admission; white blood count 15,950; segmented cells 74%; urine negative.

Physical examination revealed a well developed, well nourished woman in apparent acute discomfort and complaining of right lower quadrant pain. The abdomen was moderately obese and there was exquisite tenderness in the right lower quadrant with resistance, rebound tenderness, and contralateral tenderness. No mass was palpable through the resistent musculature. The right upper quadrant was soft. Pelvic examination was not remarkable. The clinical impression was that of acute appendicitis. Chronic disease of the upper intestinal tract was considered on the basis of the history but the preponderent evidence of acute inflammatory disease presented itself at the right lower quadrant. The diagnosis of acute appendicitis was made and the patient prepared for surgery.

The abdomen was opened through a right lower quadrant pararectus incision and upon opening the peritoneal cavity there was evidence of an acute inflammatory process characterized by cloudy transudate and an edematous overlying omentum. On displacing the omentum a large edematous bulbous cecum was disclosed which if not for the muscle guarding should have been palpable. The appendix came easily into view and was noted to be superficially injected, thickened, but otherwise not remarkable enough to suggest the primary disease as having arisen in the appendix. The cecal mesentery was short, and quite edematous so that the mass could not be mobilized. The inflammatory tumefaction involving what appeared to be the entire cecum seemed to originate from the mesenteric border. This tumefaction was rubber-like and ill defined enough to warrant cecostomy for direct visualization. Upon so doing the clinical impression by the gross pathology was that of a perforating carcinoma in which the perforation was sealed off externally by omentum. A hemicolectomy was performed including the terminal ileum and a primary end to end ileocolic anastomosis was accomplished.

The patient made an uneventful and uncomplicated recovery. Microscopic Diagnosis: "ruptured acute diverticulitis of the cecum; negative appendix".[4] Following recovery this woman was subsequently more completely evaluated for her complaints of chronic indigestion and constipation. She was found to have a sigmoid diverticulosis, a chronic gastritis, and a normal functioning gall bladder. Because of her chronic constipation and associated lower abdominal discomfort as well as her present experience with her right colon she underwent sigmoid resection with effective relief of her symptoms. At a later date she had an episode of acute pancreatitis which was effectively treated medically. She has had no further right lower quadrant abdominal discomfort.

Case II. Mr. A. L. was seen three days after Case I, a 48 year-old man complaining of abdominal pain of two days duration associated with anorexia and nausea. His pain was localized to the right lower quadrant. Past history and past systemic review was not remarkable. On admission he had a temperature of 100.6; a white blood count of 17,150 with 75% segmented cells; the urine was negative.

Examination revealed a well developed, well nourished man complaining of localized right lower quadrant pain. On examination the abdomen was exquisitely tender in the right lower quadrant, considerably resistant, and with rebound and contralateral tenderness. The clinical impression was that of acute appendicitis and the patient was prepared for surgery.

The abdomen was opened through a right lower quadrant McBurney incision. On opening the peritoneal cavity a section of omentum was displaced and the presenting lesion was found to be that of a mass involving the cecum adjacent to what appeared to be a normal ileum. The mass felt hard and rubbery. The appendix was notably elongated but did not seem to be otherwise remarkable en gross other than for superficial injection of the serosa as it lay adjacent to the inflammatory process of the cecum. A diverticulum, acutely inflamed, and about the size of the terminal phalanx of the thumb was isolated and the diagnosis of a ruptured cecal diverticulum was made. The inflammatory process extended into the cecal wall so that the procedure of choice seemed to be a resection of the head of the cecum as done to include the diverticulum and the surrounding inflammatory tissue. The cecum was closed with a running 000 chromic suture and the closure reinforced by a double row of interrupted 3-0 silk sutures. The appendix was removed in the usual manner.

Recovery was uncomplicated and uneventful. The microscopic diagnosis was "gangrenous diverticulitis with perforation; healed appendicitis".[4] Subsequent x-ray examination of the colon revealed no evidence of other colon diverticulae.

Comment

The diverticulae of the cases reported were both of considerable size. In the first case the impression of a ruptured carcinoma of the cecum resulted in the procedure of ileocecal resection. In the second case, although the cecum was considerably involved, the diverticulum could be isolated and a local resection done. Undoubtedly the experience in the first case was of considerable help in the surgical management of the second case. If hindsight could be of any value I believe that both these cases not withstanding their uneventful recoveries might have been treated effectively by antibiotics and bed rest with surgery at a later date when the acute process may have subsided. Perhaps then in the first case a less radical procedure undoubtedly might have been carried out. It is, however, difficult to stay out of an abdomen in which one suspects acute appendicitis despite the statistics of some exponents of delayed surgical intervention or even medical treatment of acute appendicitis. The treatment of choice of solitary diverticulitis is simple excision of the diverticulum. The treatment of the complications may demand simple drainage or local cecal resection.

Summary

1. The literature of acute solitary cecal diverticulitis has been reviewed and two cases added.

2. The gross pathology may frequently strongly suggest a tumor of neoplastic origin and a more radical procedure than necessary may be done. To think of acute solitary diverticulitis may avoid more radical surgery than may be necessary.

3. The difficulty in diagnosis has been discussed as has been the surgical management.

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SUBDURAL HEMATOMA

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Because they failed to make an early diagnosis of subdural hematoma, two California physicians were castigated at great length in a recent feature article of a nationally distributed popular magazine. We have nothing further to say concerning the article, as we are not particularly concerned with the often impossible early diagnosis of the condition. However, we are very much concerned with the often very difficult timely diagnosis of subdural hematoma, as the patient is doomed without timely specific treatment.

Acute subdural hematoma occurs in severe head injuries in association with cerebral contusion and laceration, and usually is of less importance than the direct cerebral damage. Chronic subdural hematoma can be caused by even mild head trauma, and may produce no symptoms or clinical signs for days, weeks, or months after the injury. When the clinical picture develops, it may at first consist of no more than headache, or may seem typical of a cerebrovascular accident. By this time, the mild head trauma that caused it is often forgotten. In these cases the diagnosis is difficult and will be missed if the physician fails to keep it in mind.

The subdural space is normally a potential rather than an actual space, containing only a few drops of clear fluid which lubricate the adjacent membranes. The arachnoid forms the inner surface, the dura mater the outer. Neither presents a vascular or lymphatic bed, and absorption from the subdural space is negligible.

Bleeding into the subdural space may occur from torn vessels on the surface of the brain. In these cases, bleeding may be arterial, associated with severe brain damage, and result in an acute subdural hematoma.

More often, the hemorrhage is from the thin-walled veins which traverse the subdural space, passing from the cerebrum to the dural sinuses. Here the venous pressure is so low that bleeding is quickly tamponaded and stopped by an accumulation of subdural blood too small to increase intracranial pressure above normal limits. At this point, the patient may have nothing more than headache or no symptoms whatever.

This situation usually persists for a week to ten days (up to several months in the truly chronic cases) during which time the clot begins to liquefy and break down. The resulting chocolate colored fluid of high osmotic effect draws an ever increasing amount of fluid from the surrounding tissues and adjacent subarachnoid space, causing a steady increase in the volume of the subdural hematoma[1]. Unlike the original venous bleeding, this continues remorselessly until surgical intervention or death from increased intracranial pressure. During this phase of increasing volume of the hematoma, pressure against the brain produces symptoms and clinical signs which in some cases indicate a probable diagnosis of subdural hematoma. In other cases the clinical picture is indeterminate, often resembling a cerebrovascular accident, and the diagnosis is made only if a subdural hematoma is searched for with exploratory trephines or diagnostic x-ray procedures. The condition is now detected much more frequently than it was in Harvey Cushing's time. During the nine years ending in 1925, only 11 cases were found in the records of the Peter Bent Brigham Hospital[2].

The following is an analysis of 65 patients with surgically treated subdural hematoma. Of this number 53 were adults and 12 were infants or young children. As these two broad age groups differ considerably in many respects, they will be considered separately for the most part.

Among the 53 adult patients there were 30 (56 per cent) in whom acute subdural hematomas occurred in association with severe direct injury to the brain itself. In many of these the subdural clot itself was actually a relatively insignificant aspect of the injury. The hematomas in 23 (44 per cent) of the adults were either chronic or subacute and were not associated with severe acute brain injuries. On this basis, these patients will be discussed in two separate groups. The infant patients will similarly be separated into two groups.

Only 65 per cent of the adult patients with chronic or subacute hematomas could recall having had a head injury of even minor severity. Presumably the other 35 per cent had suffered injuries which were so insignificant as to be completely forgotten. In only 26 per cent was the original injury severe enough to have caused loss of consciousness. It may be noted however, that 65 per cent exhibited some impairment of consciousness in the immediate pre-operative period. As the original head injuries in this group were not severe, it is not surprising that skull fractures were visualized in only 3 patients (13 per cent).

The most common symptom in this group was headache, and, in all, 48 per cent had this complaint. Despite the time interval between the injury and the onset of symptoms papilledema was seen only twice (8 per cent). Dilatation of one pupil with loss of the light reaction was present in 13 per cent and other cranial nerve abnormalities were discovered in 13 per cent. Motor weakness or paralysis occurred in 52 per cent of this group and reflex changes in only 30 per cent. Impairment of coordination occurred twice (8 per cent). Mental acuity was impaired in 45 per cent of these patients. This is similar to Taarnhoj's experience, a number of his patients actually being treated for mental disturbances before the correct diagnosis was established[3].

Lumbar puncture was performed in 18 (78 per cent) patients of this group. The nature and incidence of the abnormal findings are given in Table 11.

Treatment in all instances consisted of evacuation of the hematomas through one or more trephines with a small subtemporal craniectomy usually being made to facilitate this. When membranes had formed around the hematoma care was taken to remove the inner membrane as completely as possible. There were 2 post-operative deaths among these patients for a mortality rate of 9 per cent. In a similar group of patients Gomez[4] reported a mortality of 16 per cent.

In Table I are outlined the findings in the patients with severe acute brain injuries associated with the hematomas. In most cases the subdural hematoma was actually of relatively minor significance and as one would expect many of the patients succumbed to the severe brain injuries despite prompt surgical treatment. A more or less comparable series of patients was reported by Gomez[4] in 1957 with a mortality rate of 55 per cent.

The following case history is that of a young man with a subacute subdural hematoma.

TABLE I
SIGNS AND SYMPTOMS WITH SUBDURAL HEMATOMA

	ADULTS		INFANTS	
	CHRONIC	ACUTE WITH BRAIN INJURY	CHRONIC	ACUTE WITH BRAIN INJURY
Total Cases	23	30	10	2
Trauma	65%	100%	20%	50%
Immediate Coma	26%	93%		50%
Skull Fracture	13%	53%		50%
Headache	48%	3%		
Papilledema	8%	3%		
Pupillary Abnormality	13%	50%	10%	
Cranial Nerve Abnormality	13%	10%		
Convulsions	4%	10%	50%	
Motor Loss	52%	46%	30%	
Reflex Changes	30%	40%	10%	
Ataxia	8%			
Impairment of Consciousness	65%	100%	10%	100%
Impairment of Mental Acuity	39%	13%		
Bulging Fontanel			20%	50%
Post-Operative Deaths	9%	70%	0%	50%

H. L., a 25 year old white male, was admitted to the medical service because of headache of six days' duration. On the day before the onset of the headache the patient had been kicked in the head during a football game. He did not lose consciousness after the injury but vomited several times during the ensuing twelve hours. On awakening the following day, the patient was aware of generalized headache which persisted to the day of admission.

Examination

At the time of admission examination revealed a firm tender swelling in the occipital region. Physical and neurological examinations were otherwise negative and X-rays of the skull revealed no fracture or other abnormality.

Hospital Course

On the day following admission a lumbar puncture was performed. The spinal fluid pressure was 270 millimeters and laboratory examination of the fluid revealed no abnormality. Neurosurgical consultation was obtained and again no neurological signs were discovered. It was noted however that slight blurring of the margins of the optic discs was present. Lumbar puncture was repeated on the fourth day of hospitalization. The spinal fluid pressure was now 220 millimeters and again the examination of the fluid itself was negative. As the patient's headaches had been subsiding and he seemed well otherwise, he was discharged the following day.

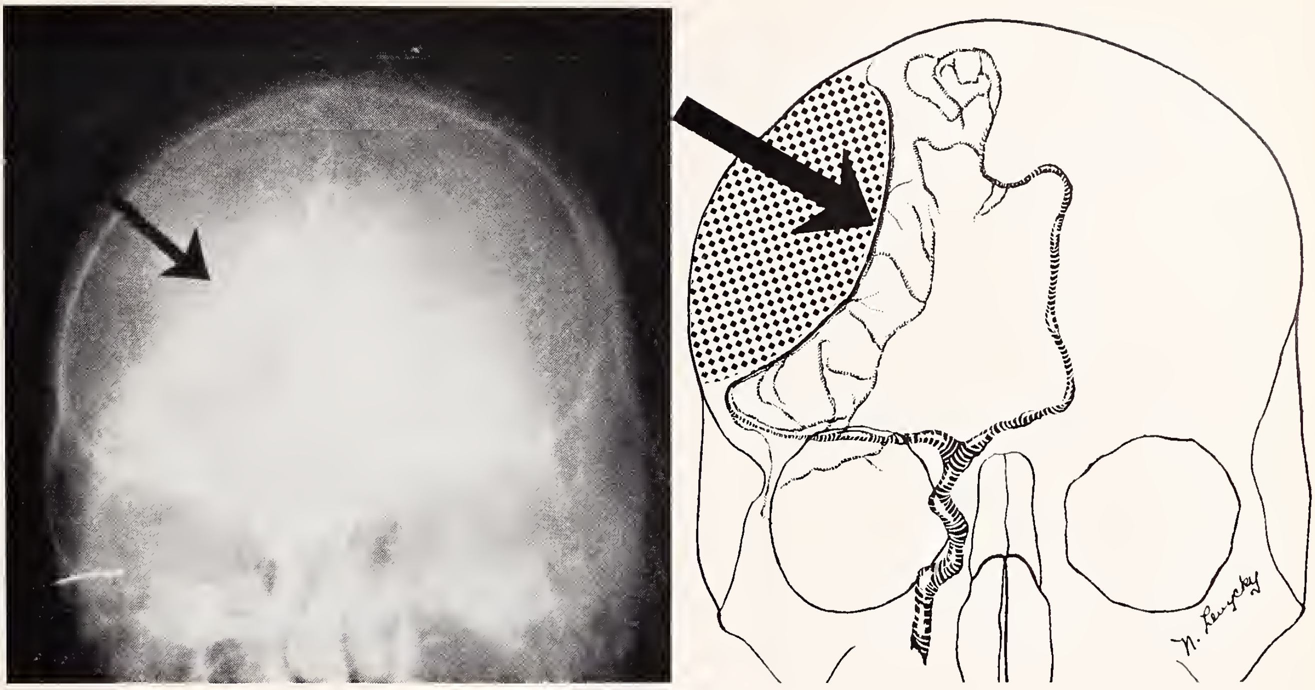

FIGURE I

Patient A. W., carotid arteriogram. The arrow is in the subdural space and points to the cortical vessels which have been displaced from their normal position adjacent to the skull by the subdural hematoma. The displacement of the anterior cerebral artery to the opposite side may also be noted. An artist's sketch (b) is provided to indicate this more clearly.

Ten days later the patient was re-admitted to the hospital because of recurrence of headache and the development of aphasia of three days duration. Examination now revealed early papilledema and a partial motor aphasia. Two days after admission, neurosurgical consultation was obtained again and the patient taken to the operating room where a subdural hematoma was evacuated through a left subtemporal craniectomy. No membranes had formed around the subacute hematoma and a trephine opening in the right temporal area revealed no hematoma on this side.

Following operation, there was rapid resolution of the neurological deficit. The patient was discharged from the hospital on the tenth post-operative day at which time he felt quite well and neurological examination was entirely normal.

The sequence of events in this case is fairly typical of the development of subacute subdural hematoma. As the time interval between the injury and the onset of pressure symptoms is a week or more, the injury is usually relatively severe. In most instances a definite history of cranial trauma can be obtained. The development of neurological abnormalities or impairment of consciousness a week or more after such an injury should of course immediately suggest the possibility of a hematoma being present.

The following history demonstrates the deceptive clinical picture presented by a chronic subdural hematoma.

A.W., a 63 year old white male, was admitted to the hospital after having been found in a stuporous state by his landlady who broke into his room when she realized he had not been seen for three days. Although the patient was unable to give a history it was learned that he had suffered a minor head injury two months previously and that four days before admission he had complained of weakness of the right arm.

Examination

The patient was deeply stuporous responding more or less incoherently to questions. A central facial weakness was present on the right and there was also a severe right hemiparesis with a positive Babinski sign on the same side. General physical examination was not remarkable.

Hospital Course

On the day following admission it was noted that the patient was less responsive than he had been. A lumbar puncture was performed revealing the spinal fluid pressure to be 360 millimeters. The fluid was clear but its protein content was 80 milligrams per-cent and the Pandy test was positive. Following the lumbar puncture a left carotid arteriogram was performed demonstrating the presence of a large subdural hematoma. (Fig. 1).

Immediately following the X-ray procedure the patient was operated upon. A chronic subdural hematoma with well formed membranes was present on the left. This was evacuated and the inner membrane excised. Post-operatively the patient quickly regained consciousness and the weakness of the right arm and leg also improved quite rapidly. Recovery was complete in 10 days.

There were 12 infants and young children with subdural hematomas in this series. Of these, only 2 had associated severe brain injuries. One had suffered a severe head injury and skull fracture and was immediately rendered unconscious. The other patient had no fracture and no history of injury could be obtained from the patient's parents. Both patients were unconscious prior to surgery and the more severely injured patient did not survive.

Of the 10 patients with chronic and subacute hematomas there were only 2 in whom a history of trauma could be obtained. Fractures could be visualized in none of these patients. It is of interest that convulsive seizures occurred in 50 per cent of this group compared with only 4 per cent in the adult group. A dilated fixed pupil was seen in only one patient and consciousness was impaired in only one during the pre-operative period. In 2 patients the anterior fontanelle was bulging and in these instances this was the only abnormal finding related to the head or central nervous system. Motor weakness was present in 3 of the patients and in only one could any abnormality of the reflexes be elicited. Lumbar puncture was performed in 6 of these patients and revealed some abnormality in all but one. Table II indicates the incidence of the spinal fluid changes that were discovered.

Table II

Spinal Fluid Examinations

	ADULT CHRONIC	ADULT WITH BRAIN INJURY	INFANT CHRONIC
Number	18	18	6
Pressure Elevated	33%	50%	33%
Increased WBC Count	5%	16%	0%
RBC	66%	88%	0%
Increased Protein	42%	16%	33%
Xanthochromia	21%	16%	33%
Normal CSF	17%	11%	16%

As in the adult groups, all 10 of these patients were operated upon with the hematomas being evacuated and inner membranes, if present, excised. There were no post-operative deaths in this group of patients. The following case history is typical.

C. P., a two month old male, was admitted to the hospital because of pneumonia. The illness was apparently of only a few days' duration but in addition it was noted by the pediatrician that the infant had never seemed entirely well since birth although no specific abnormalities were described.

Examination

Physical examination on admission revealed evidence of a right upper lobe pneumonia. No neurologic abnormality was present and the anterior fontanelle appeared normal. X-ray of the chest confirmed the diagnosis of pneumonia and the usual laboratory studies were also in keeping with this.

Hospital Course

Approximately one week after admission it was noted that the pneumonia was subsiding as expected but that the infant continued to do poorly in general. The anterior fontanelle was not bulging but bilateral subdural taps were performed with 10 c.c. of clear fluid being obtained on the right and 3 c.c. of similar fluid on the left. A right subdural tap three days later revealed 17 c.c. of xanthochromic fluid under obviously increased pressure.

On the seventeenth day following admission the patient was taken to the operating room where bilateral chronic subdural hematomas were drained through subtemporal trephines. No membranes were present.

The post-operative course was uneventful. The patient's general condition gradually improved and at no time did neurological impairment become manifest.

This patient is a good example of the clinical picture often seen in infants with chronic subdural hematoma. There were actually no specific signs or symptoms of central nervous system disease present in this case and event the anterior fontanelle did not appear abnormal. Only the feeling that the infant did not look well suggested the possibility of a hematoma. Fortunately in this age group the diagnosis can usually be readily established by puncture of the subdural space through the anterior fontanelle or coronal suture. That the diagnosis could easily be overlooked until irreparable brain damage had occured is quite apparent.

A comparison of the groups of patients described above reveals several differences among them. Most striking is the difference in the mortality rates between those patients with subdural hematomas and in addition acute cerebral trauma, and those with hematomas alone. This of course is a consequence of the brain injury, not the hematoma. Actually in many of the former the hematomas were quite small and contributed little to the symptoms and outcome.

Even a cursory glance at the findings listed in Table I will indicate that no one sign or symptom can be thought of as pathognomonic of either acute or chronic subdural hematoma. The most common finding in both groups was impairment of the state of consciousness but this did not always occur in the chronic group which represents the greater diagnostic problem. Even lumbar puncture did not always reveal a significant abnormality. It is important therefore to keep in mind that the absence of a particular finding does not rule out the presence of a hematoma and in many instances this can be done with certainty only by making diagnostic trephines. Both encephalography and angiography will often aid in making the diagnosis and these procedures are often used. However it has been demonstrated that not all will be diagnosed by these studies so that actual exploration of the subdural space remains the only certain diagnostic procedure.

Again, as Table I indicates, positive findings occur even less often in infants and young children. Although not shown in the table, very often the only abnormality, particularly in very young infants, is irritability and a failure to do well in general with no specific signs being present[5]. As in the adult patient, the presence of a subdural hematoma can be proven or ruled out in many cases only by air study, arteriography or exploration of the subdural space. In infants, before the anterior fontanelle has closed and the cranial sutures have fused, the latter is easily accomplished by needle puncture. In view of the fact that there may be little in the patient's history or neurological examination to indicate the presence of this lesion, it is apparent that often only a "high index of suspicion" will enable one to avoid missing the diagnosis of this curable lesion.

Summary

Sixty-four patients with acute, subacute or chronic subdural hematomas are presented. Both adults and infants are included and the differences in the development and symptoms of chronic subdural hematoma in these two age groups is indicated. It is emphasized that in neither group is there any clinical finding or group of clinical findings by means of which the presence of a chronic subdural hematoma can be proven or ruled out with certainty. Although it is now agreed that subdural hematoma is caused by head trauma, no history of head injury can be obtained in a large percentage of these patients. Also, although a chronic subdural hematoma is an intracranial space-occupying lesion which has been present one week to several months, papilledema occurs rarely and frequently lumbar puncture reveals the pressure and constituents of the spinal fluid to be normal. Often therefore, encephalography, arteriography or exploratory trephines are necessary to confirm or rule out the suspected hematoma. As trephines can be performed with local anesthesia, there is little risk associated with this procedure even in critically ill patients.

All of the patients presented here were treated surgically. If membranes were present around the hematoma care was always taken to excise the inner membrane as completely as possible in addition to the evacuation of the hematoma. When no membranes were present evacuation of the hematoma and drainage of the subdural space sufficed. The mortality rate in the patients with acute hematomas associated with severe brain injuries is high as a consequence of the direct brain damage. In the adult patients with chronic and subacute subdural hematomas the mortality rate was 9 per cent and in the similar infant group there were no postoperative deaths. Without surgical treatment none of these patients would have survived, emphasizing the tragedy of not establishing the correct diagnosis.

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Progressive Patient Care

Progressive patient care has attracted a great deal of professional and public interest during the past few years. Although a great deal of attention has been given to the economics of various modifications of progressive patient care, the primary emphasis quite properly has been upon its effect upon the improvement of the care of the patient.

Advocates of progressive patient care have pointed out the possibility of caring for many patients in less expensive hospital accommodations and in the decrease of cost to patients for selected procedures in less complicated environments than is possible under conventional methods. It is important to realize, however, that to date there have not been any conclusive demonstrations that the overall cost to all patients or to the community is appreciably lowered by progressive patient care programs.

There is ample evidence, however, that adaptations and modifications of the conventional general hospital program of caring for patients through the progressive patient care concept will substantially improve patient care in selected areas. The Manchester Hospital project is now beyond the demonstration stage, and has made a substantial contribution to our knowledge in this regard. It has shown that a stratification of patients in categories of intensive care, conventional care, minimal or self-help, and chronic and long-term, will provide a more satisfactory environment for these various groups of patients, and will enable nursing personnel to work more efficiently in situations that are particularly suited to their interests and training.

Intensive care of patients is an important component of this stratification, and is a logical extension of the post-anesthesia recovery room which has become common in most general hospitals today. Different patterns of intensive care are favored in various hospitals dependent upon their size, proportion of number of acutely ill patients, and the degree of departmentalization of the hospital into the various medical specialties.

The brief article in this issue of *Connecticut Medicine* by Scoville and Shortliffe presents an excellent discussion of this subject with an extensive bibliography. Their conclusions and recommendations are of value to all hospitals and physicians. Intensive care programs should be seriously considered in most hospitals that are of sufficient size to have a daily census of more than four to eight patients who are seriously ill and require special attention.

A. W. S.

New Department Of Epidemiology And Public Health

Elsewhere in this issue is an important announcement of a new Department of Epidemiology and Public Health in the Yale School of Medicine under the direction of Dr. A. A. Payne, formerly Chief Medical Officer for endemo-epidemic diseases of the World Health Organization in Geneva. The new department is a combination of the Department of Public Health formerly headed by Dr. Ira Hiscock and the section of Epidemiology and Preventive Medicine formerly headed by Dr. John Paul. This department will be concerned with "instruction of both medical and graduate students and will pursue a vigorous research program in epidemiology and biostatistics." Subsumed under one leadership, will be activities in the biological aspects of non communicable as well as communicable diseases in populations, but also a probing for environmental, social and behavioral factors with their important roles in the health of populations.

An important aim of the department will be the training of future leaders in the fields who can qualify for the degrees of doctor of public health and doctor of philosophy in epidemiology or biometry.

It was Sigerist who said many years ago that "Medicine must of necessity become preventive medicine. There is no point in letting people break down and suffer from preventable diseases. There are enough sources of suffering in the world that may not be prevented so easily." Yale is to be congratulated on seeing the wave of the future and pursuing it for the benefit of ourselves and all peoples of the world with whom the department will have intimate contact through their educational institutions.

L. H. N.

Autoimmune Heart Disease

Generally animals do not produce antibodies against their own tissues. However, in a small but significant percentage of instances some animals can be made to develop antibodies against their own tissues. Over 60 years ago Metalnikoff produced in guinea-pigs sensitivity to their own spermatozoa[1], that is they developed autoantibodies. Since then autoantibodies have been found against lens, brain, thyroid, adrenal, kidney and skin[2].

During the past few years it has been shown that cardiac tissue also can give rise to the production of autoantibodies. Just what changes take place in the cardiac tissue to render it "foreign" or "not-self" and thus cause the body to produce antibodies against it is unknown. It has been supposed that the changes in cardiac tissue caused by the agents that produce the damage, such as streptococcal infection or myocardial necrosis, has sufficiently altered the cardiac tissue so that it is now "foreign" and "not-self' 'thus permitting autoimmune responses to occur.

Heart specific antigens are present in all animals that have been tested. Thus the serum of a patient will react with heart extracts from other animals. But to react against ones own tissue is difficult to understand. Antigen-antibody reactions however do produce pathologic effects in allergic diseases like serum sickness, and glomerulo-nephritis has been produced experimentally in animals by the use of nephrotoxic sera. It is known that anti-heart antibodies have been found in the blood of animals without cardiac lesions and also in patients with cardiac damage resulting from cardiotomy and myocardial infarction without autoimmune responses. It is obvious then that cardiac damage leaks antigen into the circulation and produces results comparable with those obtained by active immunization of experimental animals.

Although anti-cardiac antibodies are present in a high percentage of diseases associated with cardiac injury the auto-immune diseases are relatively infrequent, occurring in less than 4% of all cases. Why is it that only a relatively few individuals have the capacity to produce circulating autoantibodies and develop an autoimmune disease? The answer to this question is unclear and as is usually the case one suspects a hereditary or genetic factor.

The criteria for the existence of an autoimmune reaction are derived from epidemiologic, histologic, and immulogic data, are five fold, and have been well described by Davies and Gery[3]. (1) Where there is a clear precipitating event the specific symptoms will appear after a period usually 2-3 weeks, during which the autoimmune response will develop. (2) The pathologic lesion is a typical granulomatous infiltration. (3) The patients will reveal in the blood, organ-specific antibodies, a skin reactivity and gammaglobulin accumulation at the site of the lesion. (4) Similar diseases by immunization with appropriate antigens can be produced in experimental animals. (5) In one case, allergic encephalomyelitis in rats, the autoimmune disease has been passively transferred by injection of lymphoid cells from a diseased animal into a normal animal. If we use such criteria, epidemiologic, pathologic and immunologic, then some well known forms of heart disease fulfill the aforementioned criteria.

A. Rheumatic Heart disease—the idea that it is a sensitization phenomenon was first proposed by Zinsser and Yu in 1928[4]. Since then it has been shown that by injecting heart extracts in various animals when combined with a foreign serum, one can produce a diffuse infiltrating lesion in the heart which is a form of interstitial myocarditis. This lesion is similar to that found in patients dying of acute rheumatic fever. The same kind of lesion has been produced in rabbits that have been immunized with heterologous heart tissue. Furthermore in some rheumatic fever patients circulating antibodies have been described which will selectively link up with heart tissue. Histologic evidence also supports the idea of an autoimmune reaction since the hearts show a concentration of gammaglobulin at the site of the lesion, the gamma globulin being recognized as the antibody fraction of the blood. Streptococcus infection is linked intimately with rheumatic fever but in what way it triggers the autoimmune response is still obscure[5]

B. Post commisurotomy syndrome[6]. This disease occurs 2-3 weeks after cardiotomy, is characterized by precordial pain and fever, responds well to steroids and poorly to salicylates. At first it was attributed to reactivation of rheumatic fever, but this is extremely unlikely since it occurs during penicillin prophylaxis and also in patients with congenital heart disease in whom no serologic evidence of a streptococcal infection is present. That it is truly an autoimmune disese can be strongly supported from the histologic evidence of the existence of a non-specific infiltrative myocarditis and from serologic evidence of the existence of circulating heart autoantibodies in the blood of such a patient.[3].

C. Post-myocardial infarction syndrome[7]. This complication also develops 2-3 weeks after the onset of the disease, with signs of pericarditis, pleuritis and a good response to steroids, thus indicating the presence of a hypersensitivity reaction. Furthermore circulating autoantibodies to heart antigen have been found in such patients. They however occur in a considerable number of patients who do not develop the post-myocardial infarction syndrome and the mystery still remains as to why only a small percentage of all infarction cases develop this syndrome.

D. Other heart disease may also be of autoimmune etiology, such as periarteritis nodosa, disseminated lupus, eosinophilic myocarditis in which the histologic picture of round cell infiltration and their good response to steroids lend support to this view. If rheumatic fever is to be classified as an autoimmune disease, then rheumatoid arthritis with cardiac involvement probably should also be so considered. Although only 1-3% of cases show cardiac involvement, those that do reveal focal granulomatous myocarditis and valvular lesions indistinguishable from rheumatic carditis.

The concept of autoimmune heart disease is so well established that the next step must be to determine why it is that with so many patients having antibodies in their blood, that only a small number of patients fall ill with an autoimmune response.

L. H. N.

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Everybody Lost

Among the bills which died in the 1960-1961 State Legislature was the Humane Research Bill, sponsored by the Connecticut Society for Medical Research and endorsed by the Connecticut State Medical Society. Who benefited from the loss of this bill?

THE DOGS?

The 14,000 dogs slaughtered in our pounds annually will still die—without hope of prolonging their own lives in laboratories, or contributing to the welfare of man, or their fellow creatures. The dogs needed for research and perfecting of surgical techniques will still be obtained, though at a maximum of effort and expense.

THE DOG-WARDENS?

They must still be torn between their own consciences and the frantic fanatics who bedevil them to make sure that every dog in the pound is executed uselessly.

THE GENUINE ANIMAL LOVERS?

As the vigorous support by the veterinarians indicated, people who really have animal and human welfare at heart are anxious to foster research into animal and human ailments and to prolong the lives of as many stray dogs as possible. Great diagnostic and therapeutic advances for humans are often perfected in animals and later used to improve the well-being of many more animals. Persons who desire healthier lives for their own pets know that defeat of this bill was bad for animals and bad for people.

THE VOLUNTARY HEALTH ORGANIZATIONS?

Higher costs for experimental animals will further strain their resources and diminish the effectiveness of their research grants.

THE GOVERNMENT?

Government agencies are deeply involved today in medical research. Larger expenses for animals will increase these research costs and force up the subsidies now being utilized for the training of medical students and graduate physicians. These expenses will affect not only the Federal Government but will impose a direct local tax burden if the University of Connecticut Medical School becomes a reality. Who pays when government expenses mount? The same old taxpayer—you and I, and even antivivisectionists!

THE RESEARCHERS?

New knowledge is not easily acquired under the best of conditions. Every added difficulty will prolong the time to find new pieces in the great jig-saw puzzle that is science.

THE SURGEONS?

Many surgical techniques are acquired and perfected by operations on dogs. Although some of our citizens view with equanimity the prospect of a little less surgical practice on dogs and a little more on people, physicians cannot be so blind nor callous.

SUFFERING HUMANITY?

Almost all of us hope to live a little longer, in a little better health than our forbears. Only medical research, as unfettered as possible, can help us achieve this ambition.

Everybody lost when the Humane Research Bill died!

R. B.

Food Additives

Many of our foods today contain in addition to the natural proteins, fats, carbohydrates, minerals, and vitamins certain other substances, some acquired accidentally, some on purpose. These latter substances are referred to as additives and their presence, usually beneficial, sometimes detrimental, is a matter of practical concern.

The addition of foreign materials to food dates back to the dawn of civilization when salt was used to prevent spoilage by microorganisms; spices were also used in the early days as preservatives. Today a great number of additives are being used. A publication of the Food Protection Committee of the Food and Nutrition Board, National Research Council, classifies about seven hundred functional, or intentional additives. Many types are known. The most common accidental additive is the pesticide which has been developed to control insects, fungus growth and other organisms which may harm food before it is harvested. Here, even though the chemical such as DDT or chlordane is successful in destroying the original pest the residue left on the fresh fruit or vegetable may surpass the amount considered safe for health. Tolerance limits are set up, as well as approved procedures for spraying, dusting, and cleaning in order to prevent harmful effects to the body when the food is eaten. Another type of accidental additive is that obtained by radiation contamination. Radionucleotides such as strontium 90 secured largely from fallout are found in foods. Considerable variations in radioactivity levels in foods from different parts of the country have been found. Percentage retention in the body is considered significant and research is being conducted to assess the probable hazard of radionucleotides in foods in relation to the maximum permissable in the body.

Among the functional additives are the preservatives which promote safety by minimizing food spoilage. These may be sequestrants such as calcium or sodium gluconate, citric acid, and sodium potassium tartrate; they prevent oxidative changes affecting color, flavor, texture and appearance as, for instance the clouding of beverages and their off flavors. Another type of preservative additive is the antimyotic, such as sorbic acid, used in processed foods such as brown-and-serve rolls, chocolate syrup, prepared mixes, and luncheon meats; when sprayed on to the wrapper of cheese this additive prolongs its shelf life. An antibiotic is used in a dip for cut-up poultry, thus retarding spoilage, or it may be injected into beef cattle prior to slaughter to reduce the time required to age the meat. Antioxidant substances such as ascorbic acid and its salts, and tocopherol are used to prevent browning of fresh fruit such as peaches during freezing, and other antioxidants keep fats from becoming rancid. Other types of functional additives, not used for their nutritive value, include buffers and neutralizing agents, colors, emulsifying agents, stabilizers, the non-nutritive sweeteners and flavorers, and the enzyme, papain, which tenderizes tough cuts of meat.

To the medical profession the additives used for their nutrient values are of special interest. It is a common practice in the United States today to add thiamine, riboflavin, niacin, and iron to white flour and bread, rice, cornmeal, and macaroni and many demonstrations on human beings have indicated that these enriched products have resulted in improved nutrition. Margarine and skim milk are being fortified with vitamin A and, to some extent, with vitamin D, and much of today's whole milk contains supplementary vitamin D. As in the case of the water-soluble vitamins the amounts to be added are specified by law. Iodine in the form of an iodide is commonly incorporated in table salt and since the iodide may volatilize a stabilizer such as sodium carbonate may be added. The use of iodized salt is advocated in the so-called goitrous regions and its use is generally considered to be without harm to the majority of people wherever they live. Calcium iodate, a cheaper and more stable compound, is used in place of the iodide in animal feed mixtures but the Food and Drug Administration has not yet authorized its inclusion in salt for human consumption. In some other countries it is so used.

The most recent nutrient additives are protein and specific amino acids. In a country such as the United States where there is a plentiful supply of animal proteins which contain amino acids of high biological value, the general use of amino acid supplements is not advocated; in regions where the protein intake is inadequate and where the disease kwashiorkor is common the use of either milk protein or certain amino acids seems desirable. The amino acid most apt to be lacking is lysine; this amino acid is made less available to the body when high dry heat is applied as in the baking of bread, the sterilization of food by radiation, and the long time extreme heat processing employed for some foods. Many studies are at present being conducted on amino acid balance and imbalance in relation to the source of the protein and to the order in which lysine, threonine, tryptophan, and other amino acids may be limiting factors.

In the United States the Food and Drug Administration is the agency largely responsible for the safety of the food supply. Among the federal acts in force today are the Insecticide, Fungicide and Rodenticide Act, the Meat Inspection Act, the Poultry Products Inspection Act, and the Food, Drug and Cosmetic Act. In September 1958 Congress enacted the Food Additives Amendment to the latter act and in March 1961 this law became completely in effect; this places on the manufacturer the responsibility of proving the safety of his product. In October 1961 the Color Additives Amendment became effective. In the case of most of the food additives tolerance levels are stated, giving specific amounts allowed. However, the Delany Clause of the Food Additives Amendment prohibits the setting of a tolerance for any additive which has been found to induce cancer in man or animal. With the safeguards now in effect, food additives make a valuable contribution to the food industries as well as to the consumer.

M. S. C.

This article has been reviewed by the Advisory Committee on Nutrition of the Committee on Public Health of the Connecticut State Medical Society.

Anticipate Sharp Increase In Medical School Construction

A sharp rise in construction of medical school facilities is expected in 1960-61, the American Medical Association reported today in its annual report on medical education.

Funds committed for construction of medical school facilities in 1960-61 showed an increase of 140 per cent over the figure for the previous year, the report showed. Cost estimates of facilities completed in 1959-60 were up 35 per cent, and estimates of construction begun in 1959-60 increased by 25 per cent.

Construction planned by 42 schools for 1960-61 was estimated at $126,726,167. Construction completed by 34 schools in 1959-60 was set at $94,774,376. Construction begun by 30 schools in 1959-60 was valued at $74,144,742.

The report included a special study of the potential expansion possible by existing medical schools. The findings indicated that the present maximum enrollment for the schools was 8,188 and that if the same schools were able to expand under ideal circumstances, maximum enrollment could be boosted to 9,894.

However, the Surgeon General's Consultant Group on Medical Education has estimated a need for facilities to handle about 12,000 first-year enrollments by 1971.

This goal, the council said, "will require major changes in medical school financing and extensive and expensive facilities that will need to be constructed.

"The available supply of well-trained and well-qualified students with enough financial backing from either private or public funds to enable them to complete their medical training will have to be increased considerably. Finally, in addition to this necessary expansion of existing schools, it will still be necessary to establish several new medical schools in the next decade."

During 1959-60, the University of Florida College of Medicine and Dentistry graduated their first classes and were granted full approval as four-year medical schools by the A.M.A. council.

West Virginia University School of Medicine is now in the process of expansion to a full four-year program and will be eligible for approval as a four-year school in 1961-62, the council reported. The University of Kentucky College of Medicine dedicated its new facilities and matriculated its first class in September 1960.

The record number of students receiving M.D. degrees totaled 7,081, compared with 6,860 in 1958-59 and the previous record of 6,977 in 1954-55. Six schools reported increases in their graduating classes of 1959-60 of over 15 per cent—Missouri, Columbia; Albert Einstein, New York; Arkansas, Little Rock; Pittsburgh, Pittsburgh; Western Reserve, Cleveland, and North Carolina, Chapel Hill.

Women made up 5.5 per cent of the 1959-60 graduating class.

First-year enrollment for 1959-60 was 8,173, compared with 8,128 in 1958-59. However, the report pointed out that the 8,173 students represent "the largest enrollment to date in approved medical schools in the United States." The average size of entering classes was about 96 students.

Approximately two-thirds of the students entering medical schools had "B" average grades while the other third was divided equally between "A" and "C" students. This make-up showed little change from the previous year.

There also was little change in the number of students who dropped out of medical school. However, there was a decrease from 73 per cent to 57 per cent in the number who dropped out in the third and fourth years "for reasons other than academic."

THE PRESIDENT'S PAGE

A principle which has withstood the test of time states that when one is faced with a difficult problem he should seek the advice of experts. We who practice medicine are well aware of the soundness of this principle for practically daily we encounter problems in diagnosis and treatment which require the exercise of this judgment. So, it was quite appropriate when the Connecticut State Medical Society was faced with the problem of seeking means for the financing of medical needs of the aging that we seek advice. We were most fortunate in the response we received. Representatives of The Connecticut Hospital Association, Connecticut Chronic and Convalescent Hospital Association, Pharmaceutical Association, The Dental Association, Connecticut Blue Cross, Connecticut Blue Shield and The Commercial Insurance Industry of Connecticut quickly responded to our invitation to meet and discuss ways and means of meeting the financial problems of the aging for medical assistance. Not one of these representatives was asked to commit officially his parent organization. Each participant was presented with the question at hand, in which we had a common interest and the informal discussions which ensued, I can assure you, were productive. It is my own opinion, that Connecticut as a result, has one of the best laws enacted so far under the Kerr-Mills Legislation. I believe we can attribute this, to some extent, to the discussions which took place during the fall and winter months.

In addition, the effort made to seek permission from the General Assembly by the Insurance Companies doing health insurance business in Connecticut to join together, to offer the senior citizens of Connecticut health Insurance against major financial loss, came into being partly at least in response to queries raised at these meetings. The Insurance Industry's contribution to meeting the problem facing the aged and now officially called "Connecticut 65 Extended Health Insurance" has stimulated nation-wide interest since it was first made public. The plan is primarily directed toward provision of major medical expense benefits and may be complemented by a plan of basic Hospital-Surgical benefits. Indeed, figures available indicate that considerably more than fifty per cent of our senior citizens have basic health insurance either through Blue Cross—Blue Shield or Commercial Carriers, and so the emphasis of "Connecticut 65" is on major medical expense benefits. After an individual has incurred covered expenses in a calender year equal to his deductible, the plan pays a portion of the additional covered expenses of that year up to one half the life time maximum with a life time maximum of $10,000 being payable under the High Option Plan and a maximum of $5,000 being payable during the life time of the individual under the Low Option Plan. The plan cannot be cancelled unless it is terminated for the entire group. The full details of the plan should be available to every physician at the time of the County Meetings this fall.

Inasmuch as the Associated Health Insurance Companies of Connecticut have expended considerable effort and exceptional talent in the formulation of this program and further since the program is to be sold on a very low profit, with any favorable experience beyond the same low profit being utilized to improve the provisions of the program, I would urge all physicians to acquaint themselves with the program. Let us recognize this effort of the Insurance Industry to maintain the traditional mode of free practice of medicine in the private sector of our economy rather than as a governmental function.

Thomas M. Feeney, m.d.

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We Just Want The Facts

One studies with interest followed by some concern the results of a single-question poll recently conducted by Mr. George Gallup of the American Institute of Public Opinion, Princeton, New Jersey.

The question he asked "a carefully selected sample of 1536 adults" was: Would you favor or oppose having the Social Security tax increased in order to pay for *old age medical insurance?* (italics ours)

The results showed that of those interviewed, 67% would favor the plan, 26% would oppose it and 7% held no opinion. From the poll, Mr. Gallup concludes that "the public backs a Social Security plan for medical care."

This is indeed a startling and disturbing finding for those of us who still retain a vestige of hope that freedom can be preserved in the practice of medicine. Taken at face value, these figures would certainly make it appear that we are espousing a most unpopular cause in opposing the present administration's aged health plan. The replies of those polled would seem to give considerable substance to Mr. Ribicoff's prediction that "180,000 doctors will not be able to defeat the will of 180,000,000 Americans," and to the AFL-CIO's Nelson Cruikshank's assertion that those who are not in favor of Social Security medicine "are short-sighted in their lack of ability to see that the people demand this program."

One must of necessity, then, pause to reflect seriously on the seemingly incontrovertible results toted up for us by Mr. Gallup. "67% would favor the plan," he says, "and only 26% would oppose it." That's certainly a convincing enough majority to satisfy almost anyone! But before we admit to total defeat on this issue and bow to the apparent weight of public opinion, let us venture to explore the nature and conclusions of this poll in a little greater depth. Maybe—just maybe—there's a kicker in it somewhere.

Without making any specific inquiries into the method used to conduct this poll among "the carefully selected sample" of adults, let us go right to the heart of the matter, which is the question itself. Gallup asked these people if they favored or opposed increased taxation to pay for *old age medical insurance.* (italics again ours) This designation was coined some time ago by Wilbur J. Cohen, Assistant Secretary of HEW, in order to obscure from an uninformed public the fact that not a single aspect of the proposed OASDI health operation would be based on true insurance principles. The repeated use of this convenient misnomer has made it possible for Mr. Walter Reuther and Senator Hubert Humphrey and a score of others to declare "It would operate just like Blue Cross and Blue Shield and other voluntary health insurance plans," knowing full well that Social Security medicine would not operate like these well-established and experienced prepayment plans at all.

In a recently written essay, Assistant Secretary Cohen attempts to justify this improper use of the word "insurance" as he applies it to the Social Security program. Designating OASDI as "social insurance," Mr. Cohen admits that it *does* differ in several important respects from "private insurance" but implies that, in his opinion, the social variety does not suffer by comparison.

"The terms of the legal right to social insurance," Mr. Cohen tells us, "are spelled out in a statute which can be amended as any law can be amended *(which means that benefits can be increased, decreased or abolished altogether by an act of Congress!)*; the rights under private insurance are spelled out in a contract, which for the duration of the . . . contract can be changed only by agreement of both parties to the contract *(which means that the policyholder will receive exactly the benefits he has paid for, no more and no less)*.

"Private insurance," Mr. Cohen goes on, "is required to maintain . . . reserves which will meet the threat of dissolution, but social insurance is financially sound as long as the legislation on which it is based provides for a plan of financing *(taxation of current and future wage earners)* which yields income sufficient to meet all benefit costs as they fall due." This latter feature of social insurance, the author refers to as "flexibility" *(which means that as long as there are people* *working from whom to exact more tax money, benefits to pensioners can be increased time and time again without regard to reserves or lack of them)*.

Whatever the Assistant Secretary seeks to prove by this scholarly bit of legerdemain, he offers no convincing evidence that "social insurance" is identical with or even similar to "private insurance," and he certainly establishes no justification for calling the King-Anderson Bill (H.R. 4222) "old age medical insurance," as Mr. Gallup did in the poll we are considering here, and as the proponents of this legislation are doing every day.

Some will argue that these intrinsic differences between social and private health plans are not important, but we believe them to be basic and no matter of mere semantics. That others share our opinion in this regard is demonstrated by the comments of Rep. Thomas B. Curtis (R-Mo.), a member of the House Committee on Ways and Means, who labelled the Gallup poll as "disgraceful" in that the question asked dealt with "medical care insurance, a misleading phrase indeed."

It appears, then, that the pollsters asked their "1536 carefully selected adults" to answer a question which was, in itself, a misrepresentation of fact and that their conclusions could be discounted to a greater or lesser degree. We can always speculate that if a different question had been posed in this instance, a different set of conclusions might have had to be drawn but this is perhaps just wishful thinking and, in any event, is not at all the point of this commentary.

What, actually, *is* the point of the prolonged and continuing battle which is being waged between those who favor government medicine for America and those who oppose it? Are we all really only jousting with windmills and splitting innumerable hairs when we present reams of testimony for and against this proposal, either as its friend or as its foe? We think not. Those who bother to listen carefully at their radios and televisions—those who read their newspapers and magazines with full attention to the factual meaning of each word and phrase, must at last realize that the interpretations being placed upon the many complicated facets of so-called "medical care for the aged" by opponents and proponents of the Social Security plan are usually quite different. These interpretations are all-important, because if one once concedes that it really is of no consequence whether H.R. 4222 is *insurance* or not then there is no object to debating that issue any further. Similarly, if one allows himself to speculate that, *without convincing proof*, most old people are probably not getting health care and require financial assistance in meeting their medical costs, there is nothing whatever to be gained by persisting in demands for a reasonable definition of "the need" for this legislation.

In other words, if we who oppose the King-Anderson Bill are beguiled into overlooking the facts as we understand them to be and are enticed into joining our adversaries under a big umbrella of "just wanting to do good for the old folks, regardless," we will rapidly join in permanent oblivion all those before us who have been persuaded to compromise principle for the sake of expediency. If we once lose our identity and elect to take the easy way out, there is little question that this socialistic medical legislation will be swept into being on a tidal wave of appealing generalities, contrived emotionalism and political breast-beating.

Practically no one argues that H.R. 4222 is "conservative" in concept, because the "liberals" have claimed it for their own. A distinguished author has offered the opinion that "a characteristic of the liberal in debate with the conservative is the . . . premise that there is . . . (really) . . . nothing to debate about. Arguments based on facts are especially to be avoided . . . because facts are tedious." Perhaps this conclusion on the part of the author is entirely unwarranted and, in any event, our Society certainly takes no cognizance of different shades of political philosophy among its members. But in this instance, it would seem to us that as long as the aged medical care issue remains under debate, and has not been enacted into law, we are performing a real public service in doing what we can to keep the facts straight.

William R. Richards, M.D.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following:

Stanley L. Grossman, M.D., Age 32—M.D. State University of New York, 1954. Interested in surgery.

Internist completing three year residency incl. 1 year fellowship Cardiology, seeks association with internist group or other position.

PLACEMENT OPPORTUNITIES

WANTED GENERAL PRACTITIONER in Litchfield County.

FOR RENT—Professional Building in North Haven.

HOUSE FOR SALE—Doctors-Dentists Row in Bridgeport.

WANTED GENERAL PRACTITIONER in Town of New Shoreham, Rhode Island.

AN OPEN LETTER
to
THE SECRETARY OF HEW

The General Manager was prompted to address this communication to Secretary Ribicoff for the reasons indicated in its first paragraph: i.e., "as an individual physician and a member of the American Medical Association" and "in response to protests voiced by more than a few members of the Connecticut State Medical Society." This is therefore not a statement from the Society as a whole, but it is hoped that a substantial segment of the membership may find themselves in general agreement with its message.

W. R. R.

August 9, 1961

Honorable Abraham Ribicoff, Secretary
Department of Health, Education and Welfare
Washington 25, D.C.

Dear Mr. Ribicoff:

I am writing this open letter to you not only on my own behalf, as an individual physician and a member of the American Medical Association but also in response to protests voiced by more than a few members of the Connecticut State Medical Society, of which I am the executive officer.

In recent months, via television, radio and the press, a number of statements by you which reflect most unfavorably upon the medical profession in general and upon the American Medical Association in particular have been carried into the homes of a great many Connecticut residents. Having urged the communications media to present the "plain, unvarnished truth" about the present administration's Social Security medicine plan for the aged, it appears to us that you have elected to create the illusion in the public mind that this "truth" can only emanate from a single source—the Department of Health, Education and Welfare. As a member of the House Ways and Means Committee was prompted to observe after hearing your recent testimony on H.R. 4222 (the King-Anderson Bill), it is a "tragedy" that you and other proponents of this controversial measure have chosen "to attack the American Medical Association rather than the AMA's arguments against the legislation." It is the possible adverse effect these "attacks" may have on our relationship with our patients which concerns us as Connecticut physicians. It is this very thing which makes us so wary of what may happen to medical care in America if it becomes regulated or controlled by government officials and politicians, most of whom have ready access to all communications media without cost and whose mere title often gives to their most off-hand public remark an unwarranted aura of "truth" and finality. It is because we have no similar opportunities to communicate directly with the public that we are using the "open letter" format on this occasion.

Limiting our present protest against your several anti-AMA charges to but one—that in which you have alleged that the American Medical Association takes or threatens to take sanctions against its members who openly or tacitly oppose its official position on compulsory Federal financing of the aged's medical bills, we respectfully ask that you justify this specific allegation to us. We of the profession in this State hold no brief whatever for the unfair treatment of even one of our colleagues by his medical organizations, whether such injustice is perpetrated in Pocatello, Idaho, Black Rock, North Dakota, or Hartford, Connecticut. As realists, we are cognizant of the fact that, in isolated instances, local medical groups have taken actions involving local issues and controversies which have later appeared to be unwise or may even have been declared illegal by the courts. In your public and official statements to which we refer, however, you have given no hint that this is the type of shortcoming with which you are now charging the AMA. Quite the contrary!

With specific reference to the King-Anderson Bill, the hearings on which have just been concluded, your sweeping condemnations of the AMA gave the clear impression that any of its 180,000 members who may disagree with official policy in this matter are in grave danger of having severe sanctions taken against them; that, even as you spoke, hundreds of American doctors were being harried and put upon by their associates because they have dared to voice support for your aged medical plan. Now, it is not possible for us of the Connecticut State Medical Society to speak with authority concerning the policies and activities of our AMA counterparts in the other forty-nine states, but we certainly can speak for ourselves and for our eight constituent county associations (total membership of over 3300). We say that no such sanctions as you imply in your public remarks are being (or have been) taken by this Society against any of its members for any of the reasons you suggest or for any reasons of even a remotely similar nature. Medical discipline, involving ethics and professional competency, we strive constantly to make more effective but achieving intellectual and political conformity among Connecticut physicians has never been an objective or function of this organization. Further, we say that the American Medical Association has never so much as suggested to this Society that anything more than the presentation of facts and informational materials be used by us to enlist support for the AMA's policies among our members.

So if, indeed, you (and Mr. Reuther, Mr. Meany and Mr. Cruikshank of the AFL-CIO) and others do have briefcases bulging with documentary evidence that literally thousands of doctors are being held captive by the AMA on this aged medical care issue and are cringing in fear lest their support of your Social Security plan become known, why do you not lay this evidence on the table as positive proof of your allegations? If, indeed, all of you people have in your secret files (as you claim) letters from "hundreds of physicians" who have been dealt with cruelly and unfairly by their colleagues merely because they are known to favor compulsory national health service, why did not one of you file at least one of these letters with the House Committee on Ways and Means for the record, in order to let the matter be investigated impartially and thus put an end to the needless doubt you have created in the public mind?

As a learned legal counsel, you are certainly aware of the rules of evidence which are followed at hearings before a court of law. Surely it is not unreasonable for us to expect that the same rules should apply at hearings before the court of public opinion. It is both good and proper that the complex pros and cons relating to the financing of health services for the aged be thoroughly explored by the people and their representatives in the Congress before any far-reaching legislation in this field is put to a vote, but we believe that all concerned should stick to the issues and develop the facts which relate to the subject. Freedom of speech, not to mention just plain good sportsmanship, would seem to us to entitle the opponents of any legislative measure to develop their case in opposition to the fullest, without being accused by its proponents of "misleading" anyone or of engaging in nefarious and un-American activities.

Sincerely yours,
William R. Richards, M.D.
General Manager

Statement Of E. Lloyd Dawe, M.D.

Before The

Ways and Means Committee, House of Representatives on H. R. 4222, 87th Congress

August 1, 1961

Many Connecticut physicians have been privileged to hear Lloyd Dawe of Danbury relate informally some of his experiences as a medical practitioner in Great Britain under National Health Service. In the following statement, recently made by him before the House Committee on Ways and Means, Dr. Dawe touches significantly upon a number of key points concerning "socialized medicine" which should be of interest to all readers of *Connecticut Medicine.*

William R. Richards, M.D.
General Manager

My name is Dr. E. Lloyd Dawe, and I am now engaged in a full-time private psychiatric practice in Danbury, Connecticut. I appear before the Ways and Means Committee today as a fugitive from socialized medicine.

I worked under its yoke in Great Britain in 1953-54. I left England because of the bureaucratic interference with my practice of medicine and the inevitable lowered standards this entailed, to say nothing of the lowering of the patient's and government's regard for the doctor because of his reduced status.

This attitude of disdain for the British health care program and the doctors who serve under it became widespread soon after the National Health Service was established in Great Britain in 1948.

It is only one—and perhaps the least important—of the potential dangers America faces if a system of nationalized medicine is adopted in this country.

H. R. 4222, which is being considered at these hearings, is the thin edge of the wedge that quite probably could bring deteriorating medical standards and medical care in the Uunited States.

As an intern in a London hospital and later in general practice there, I witnessed the unbelievable waste, interference and bureaucratic regimentation that have accompanied Britain's unwieldy social experiment.

I paid government-imposed "fines" for prescribing the best medicine for my patients. I spent anxious hours in search of hospital space for the critically ill. I saw hospital grants frivolously spent on television sets and new carpeting.

Practice under the National Health Service soon became intolerable for me, as it has for thousands of British and European doctors who have left their countries to practice in America. I, too, chose freedom and came to the United States to practice under what I firmly believe is the best existing medical system in the world today.

Those who favor enactment of new federal medical care in the U.S. today are making the same wishful promises and tranquilizing assurances that were heard in England 13 years ago.

Americans should heed the lesson taught in England, and guard well the high medical standards and freedoms they now possess.

Abraham Ribicoff, Secretary of Health, Education and Welfare, who would administer the proposed law, has been widely quoted as saying that the legislation would not authorize government supervision or control over the practice of medicine, the manner in which medical services are provided or the selection or compensation of those offering the health care services.

However, the bill itself states that hospitals, nursing facilities and home care agencies must meet such conditions of participation as the Secretary of Health, Education and Welfare requires.

The Health Secretary says that doctors would not be included in the program. However, the bill specifically includes pathologists, radiologists, psychiatrists and anesthesiologists working in hospitals or serving the hospital's outpatient clinics. The bill also would include interns and residents in teaching hospitals.

It is naive to suppose that once this legislation became law it would not be extended gradually to cover all medical practice and health care services for the entire U.S. population. It is equally naive to suppose that government financing will be provided without government control and ultimate government operation of medical services. The government would be irresponsible if it spent public funds without adequate controls and supervision.

Innocent-sounding provisions of the medical care measure can prove to be far different in praactice. I saw similar provisions as they were applied under Britain's National Health Service.

For example, the pending medical care legislation limits the drugs and biologicals that will be provided for patients to those included in the U.S. Pharmacopoeia, National Formulary or New and Non-official Remedies.

In Britain the amount and kind of drugs were also restricted for the general practitioner. Only doctors on the staffs of hospitals initially could prescribe new drugs not listed in the British Pharmacopoeia or National Formulary. Government-licensed drug houses supplied medicines, which the general practitioners were supposed to prescribe by their generic name.

Nearly every week, a number of doctors would be fined because they prescribed a drug which in their best judgment was needed by a patient but which was not on the government's official list.

Once I discovered that Luminal, a brand name for phenobarbital, which was being produced in large quantities by a private firm, was actually less expensive to obtain than the phenobarbital being made in the government's drug houses.

The restrictions on a physician's judgment to prescribe the best medicine for his patient fell particularly heavily on the younger doctor. For instance, the new man in the field might prescribe a new and expensive drug for arthritis, whereas the older physician might order aspirin. Since the government levied a charge on doctors whose prescriptions exceeded a certain percentage of the average cost for the particular area in which they practiced, the physician who prescribed the more expensive medicines suffered financially.

It became natural for a doctor to hestitate to prescribe certain drugs when he knew it would cost him money. It was difficult enough to get by on the restrictive compensation the government allowed.

A physician in general practice was paid a fixed fee per patient per year no matter how frequently he saw the patient. To earn a living of about $4,000 a year he might have had to see approximately 100 patients a day. Medical specialists were attached to hospitals and paid a salary by the government.

Such specialist positions are limited in number by the government so many a budding specialist is faced either to drudge in relatively low-paid hospital staff posts for years waiting for "dead men's shoes" or else abandon specialization and go into general practice.

Since medical care theoretically was available to everyone at anytime, we were literally swamped with patients, many of them with trivial complaints or with no ailment at all.

Free service naturally leads to overutilization. Patients and proper medical care suffer.

With the best will and intentions we could not give all the time we should have to our patients. The general practitioner tended to send any cases where diagnosis was difficult or time-consuming to outpatient departments of the hospitals. Less and less minor surgery was done in the doctor's office, since there was no time.

Besides the heavy patient load, the time spent on government paper work was fantastically high. If a man was too ill to work, he had to have a certificate filled out by his physician. For each week he was not on the job, a certificate was necessary, and another certificate had to be completed when he returned to work.

Form-filling and correspondence with the government became one of the physician's major functions. He was reduced to the role of part-time clerk.

The lack of time to care for patients meant more of them had to be shunted off to hospitals. Doctors tended to lose touch with their patients when this happened as practically no general practitioners are on hospital staffs. The doctor could visit his patient in the hospital, but he got the uncomfortable feeling that he was in the way, because he had no responsibility for the patient then. The hospital staff was in authority.

When the patient was released, his doctor got a brief letter from the hospital saying what had been done, but this break in medical care continuity is hardly the best kind of treatment for the patient. Rarely, too, did the patient have any choice over who would treat him in the hospital.

The people who support the medical care bill before Congress say that it provides free choice of either hospital or doctor.

Under the National Health Service, patients not only had no choice of hospitals, they were fortunate to get accommodations at all in the jam-packed institutions.

One of the physician's bigger dilemmas often was how to get an urgently ill patient into one of the overcrowded hospitals right away. More than once I spent hours on the phone trying to get hospital care for such people.

A central phone service finally was established which relieved this problem to some extent. But private or semi-private rooms were almost unheard of. In some hospitals the crowded wards even had beds down the middle aisles.

Unless surgery was of emergency nature, up to a two-year wait was customary. I had several child patients with chronic tonsilitis who were on the waiting list for operations for a whole year.

A major reason why the hospitals were so overcrowded was the heavy load of elderly patients, the very age group that the health care measure now before Congress would cover. Since hospitalization was free, many of the aged in Britain were shuttled off to the hospitals rather than being cared for at home by their families.

I appreciate that the aim of the aged health care legislation is to help a group of citizens who frequently incur heavy medical expenses. However, as a psychiatrist, I am convinced that the elderly person should not be encouraged in dependency. He should not be made to feel that he is a pitied ward of the state, a worn-out object of charity. Let us not destroy the self-reliant spirit. The older patient must have an incentive to keep living, to continue to be useful.

To encourage all the aged to give up their independence and become debit members of society, to receive doles regardless of need, could be a destructive influence on the older population.

Though health care of the elderly is often more expensive than that of younger persons, the British found that their attempts to improve the health services for the minority down-graded the services for the majority.

The dissatisfaction with the National Health Service has been strikingly shown in the sharp rise in voluntary health insurance plans in Britain. When the Health Service first was established, private health insurance fell off drastically. But now those who can afford it buy private health insurance because of the better treatment and benefits its assures, though the insured must also carry the heavy taxes that pay for the nationalized health plan.

The poor British taxpayer has been milked dry. The Health Service now costs more than five times the original estimate. One of the main reasons is that there are two or three government clerks for each doctor. On that basis, if the U.S. adopts a government operated health system, the federal government would have to hire nearly two million more clerks.

When the British Health Service began,, the staff of the hospital where I was an intern seemed to double overnight. The signs of bureaucracy — excessive paperwork, overhead and impersonal treatment—were immediately apparent.

Hospitals apply to the government for block grants for operating expenses. If a hospital has any money left over when it has completed a fiscal year, the next year's grant is reduced by this amount. Naturally, this system encourages wasteful practices and penalizes economical hospital administrators.

Patients and pharmacists were not guiltless either. Some patients had arrangements with their pharmacists whereby they would bring in a prescription for government paid medicine and use it instead to pay for costmetics of an equivalent value. The waste and red tape might be worth the price if they assured the best medical practice and health care. However, bureaucratic administration brought outrageous governmental interference that discouraged and handicapped medical men.

I came to the United States because I sought the opportunity to practice medicine in a way that I thought best for both doctor and patient—without regimentation, restrictions and interference. I want only two people in the medical relationship—myself and my patient. There should be no impersonal governmental third party.

In this country I have found freedom of action and professional choice. Now I feel I am practicing in the best existing system in the world. It is not perfect. But we are striving to make it better. And the best medical care can be given only in the system where a doctor is not a government clerk but an individual with professional dignity and freedom.

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Special Article

THE MANAGEMENT OF PULMONARY EDEMA

FRANK D. GRAY, JR., M.D.
New Haven

The Author. *Associate Professor of Medicine, Yale University School of Medicine, New Haven. Attending Physician, Grace-New Haven Community Hospital, New Haven. Director, Cardiopulmonary Laboratory, Grace-New Haven Community Hospital, New Haven. Consultant in Cardiology, Laurel Heights Hospital, Shelton.*

Acute pulmonary edema is a complex physiological catastrophe involving hemodynamic and neurological mechanisms and caused by disorders of a variety of organs while passive congestion of the lung is largely a hemodynamic affair precipitated by failure of the left heart. The former is treated by measures which may be expected to allay anxiety, improve oxygenation, diminish venous return to the heart, and increase circulatory efficiency. The emergency use of digitalis in acute pulmonary edema is of dubious value whereas it is the cornerstone of treatment for passive congestion.

Modern therapy is predicated upon some knowledge of disease pathology and associated physiological alterations. Unfortunately the basic mechanisms of the various edemas of the lung are quite obscure; however, careful clinical observation together with a small but growing body of experimental evidence have contributed to a pattern that is reasonable although meager in detail (1,2,3).

Edema of the lung occurs whenever some or all of the elements of fluid blood transude across the capillary wall at a faster rate than reabsorbtion and lymph drainage can accommodate. A number of factors may be implicated in this circumstance. These include change in net or transmural hydrostatic pressure, blood osmotic pressure, capillary wall permiability (about which very little is known), lymphatic drainage, and possibly transbronchial drainage although the latter is a completely unevaluated entity. Lung edema includes the state of excess fluid in the interstitial tissue space of the lung and also excess fluid in the alveoli and small bronchi. Some have felt that the term "wet lung" would be preferable.

In a general way lung edema may be divided into two distinct entities: passive congestion of the lung always associated with dysfunction of the heart; and acute pulmonary edema which may be but is not necessarily associated with heart disease. The former occurs in left heart failure and is characterized clinically by exertional dyspnea, orthopnea, and rales usually heard at the lung bases. It is the result of increased capillary hydrostatic pressure sometimes aggravated by decreased lymphatic drainage. It developes over a period of minutes or hours and recedes slowly under treatment with digitalis and diuretic agents. This form of lung edema will not be considered further except to contrast it with acute pulmonary edema.

The latter is far more dramatic and complex in its development than passive congestion. Considering the known clinical pattern and available reports of experimental studies[1] one can piece together the natural history of the disorder. Acute pulmonary edema may occur in severe infections (especially of the lungs), pulmonary embolism, head injury, extensive burns, blast injury, poisoning, inhalation of toxic fumes, and in diseases of the heart and great vessels. An autonomic nervous system reflex has been implicated involving afferent receptor endings in the heart, blood vessels, lung parenchyma, and hollow viscera with central nervous system connections through a center in the neighborhood of the third ventricle and efferent pathways via sympathetics to peripheral and pulmonary vessels[1].

From The Cardiopulmonary Laboratory, Department of Internal Medicine, Yale University School of Medicine, New Haven.

Once the "stimulus" to acute pulmonary edema has been initiated, it is followed by an increase in peripheral vasomotor tone leading to an elevation of systemic blood pressure and a shift of circulating blood into the lungs. Little is known of events within the lungs although two general theories have been put forth. One, expounded by Drinker,[4] holds that a change occurs in pulmonary capillary permiability; probably the direct consequence of tissue anoxia although others have suggested a nervous influence on capillary permiability. Another general theory has been suggested by evidence of an increase in pulmonary venous tone[5] or a decrease in pulmonary artery tone. In any event increased lung blood volume is associated with an increased hydrostatic pressure and transudation of blood cells, protein and fluid. This loss of fluid into the alveoli results in a diminished left ventricular out-put sometimes leading to shock, and hypoxia because of the filling of air spaces with fluid. The fluid obstructs the air passages of the lung so that breathing becomes very difficult.

The sequence of events leading to acute pulmonary edema may take place in seconds and subside with equal promptness in contrast to the much slower development and remission of passive congestion. So-called "cardiac asthma" and paroxysmal nocturnal dyspnea are events which probably have some of the physiological components of both passive congestion and acute pulmonary edema.

The management of lung edema begins with a careful diagnosis. The patient with preexisting heart disease probably has passive congestion if he has shown signs of progressive dyspnea, orthopnea, peripheral edema and rales, usually localized at the lung bases. He should be accorded the usual therapy for heart failure. On the other hand, a history of sudden severe dyspnea often preceeded by a feeling of anxiety, and the finding of bubbling rales over the entire lung field, expectoration of frothy pink or blood tinged sputum, distended neck veins, and high systolic blood pressure (until shock occurs) suggest acute pulmonary edema. This is particularly likely if the background includes one of the known predisposing disorders other than heart disease.

Great care must be taken to exclude broncho-obstructive disease (such as asthma and bronchitis) at the outset, since the treatment for one group of

Table I. Outline of Treatment

TIME AFTER ONSET	1ST PHASE	2ND PHASE	3RD PHASE	4TH PHASE	5TH PHASE	6TH PHASE
0	The patient should be made comfortable, the room warm, light shaded. Physicians and nurses should be calm and reassuring.					
10 to 20 min.	Morphine 10-30 mg/hour until patient is quiet. Administer I.V. if shock is present. Narcotic antagonist should be available.	100% oxygen by mask or I.P.P.B.	Tourniquets, or preferably I.P.P.B. with o_2 and aerosol of water or alcohol.	Aminophylline (Hg. diuretic if heart failure).		
120 min.					IF improvment has not begun-stellate ganglion block or spinal anesthesia; Arfonad.	
24 hours						Digitalis IF congestive heart failure is present.*

*Traditionally digitalis is given earlier. The reason for its position here is discussed in the text.

diseases is inimical to the other. Morphine, useful in the treatment of acute pulmonary edema, is contraindicated in bronchial disease because of its powerful depressing effect on the respiratory center, and epinephrine, useful in asthma, should not be used in acute pulmonary edema because it will exaggerate the peripheral vasoconstriction which is a factor in the genesis of the latter.

Once a clear-cut diagnosis of acute pulmonary edema has been made, and this must be done quickly as the disorder constitutes an emergency, a program of treatment should be started with dispatch. The treatment plan may be divided into several phases (see Table I) although in practice all phases may be executed concomitantly.

The first phase consists of allaying the patient's apprehension and interrupting the autonomic nervous system reflex which is the background of the trouble. The patient should be placed in a warm, quiet room with subdued lighting. Reassurance on the part of the physician and nurses is mandatory. Morphine is the drug *par excellence* for this phase. It quiets the patient's fears and buoys his spirits; at the same time its effect on the vasomotor centers tends to reduce peripheral vascular tone. Great care must be taken to ensure that the morphine is absorbed and if the extremities are pale and cold or if clinical shock is obviously present the morphine should be given intravenously in doses of 10 to 15 mg. (1/6th to 1/4 grain) until the patient appears relaxed and comfortable. If his respiratory center has been depressed by hypoxia, morphine may produce apnea and the physician must be prepared to administer levallorphan tartrate (Lorfan) or nalorphine hydrochloride (Nalline Hydrochloride).

The second phase, preferably begun simultaneously with the first, is the treatment of hypoxia by administering 100% oxygen. This is best done by face mask since oxygen tents usually do not deliver a concentration above 50% and nasal catheters less. It may be administered by an intermittent positive pressure apparatus. 100% oxygen serves several purposes. The high concentration raises the oxygen partial pressure in the alveoli thus driving more oxygen across the fluid barrier present in edema. The increased amount of oxygen in arterial blood permits the reduced cardiac output to maintain a more nearly normal delivery of oxygen to the tissues. Finally, the higher arterial oxygen content leads to a slower heart rate thus overcoming one of the troublesome and sometimes grave aspects of acute pulmonary edema.

The third phase consists of relieving the plethora of the lung by reducing venous return. Classically this has been done by performing phlebotomies, a perfectly sound way of reducing blood volume and venous return. The tendency for acute pulmonary edema to lead to circulatory shock before one is able to reverse the edema, however, makes phlebotomy hazardous since it encourages and accentuates shock. A wiser measure is the application of tourniquets to three of the four extremities. If sphygmomanometer cuffs are available they may be inflated to a level well above the anticipated venous pressure, but below the arterial diastolic pressure. If they are not available straps may be used but care must be taken to maintain a peripheral pulse. The tourniquets should be rotated every twenty minutes thus each limb will be free for twenty minutes of each eighty. After improvement tourniquets should be removed one at a time allowing twenty minutes to elapse between each release, otherwise a sudden flooding of the pulmonary circulation might precipitate a new attack of acute pulmonary edema.

When it is available, inspiratory positive pressure breathing (I.P.P.B.) apparatus will accomplish reduction of venous return better than phlebotomy or tourniquets. The advantages of I.P.P.B. are many. It allows careful titration of the amount of blood dammed back or released into the circulation. Ventilation is maintained at an optimal level and if respiratory depression occurs, either manual or automatic cycling can be used to keep the patient breathing. 100% oxygen can be administered by I.P.P.B. more effectively than by any other means. An aerosol of water or 20% ethyl alcohol should always be used in the nebulizer of the I.P.P.B. apparatus. Some feel that the alcohol encourages the secretion to come out in a more fluid form with less frothing. Whether or not this is true the patient seems to feel better after breathing an alcohol aerosol. The response may be due to the blood level of absorbed alcohol. In the event that vasomotor collapse occurs, I.P.P.B. must not be used since by reducing the venous return it aggravates shock.

The fourth phase consists of those measures which will improve circulatory function. Aminophylline is probably the best drug for this phase. It may be administered intravenously no faster than 20 mg./min. to a maximum of 500 or 750 mgm., or by suppository. Since intravenous mercurial diuretics act rapidly they are of some value in the presence of obvious congestive heart failure but will have no useful effect if the acute pulmonary edma is not due to heart disease.

Proceeding to the fifth phase is usually not necessary. In the majority of episodes improvement will have been attained by this time, but in refractory cases more heroic measures may be indicated. Trimethaphan camphorsulfonate (Arfonad) may be used cautiously if hypertension persists because it will produce blood pooling in the splanchnic bed thus decreasing venous return to the lung. Similarly spinal anesthesia has been found successful. These measures cannot be employed in the presence of shock. A safer but more difficult approach is stellate ganglion block with procaine or alcohol.

The sixth and final phase of management applies only to those patients who have acute pulmonary edema associated with congestive heart failure. The presence of congestive heart failure is, of course, an indication for the use of digitalis; the only question arising is when to use it. Traditionally the feeling that acute pulmonary edema was a manifestation of acute left ventricular failure led to the firmly established practice of using digitalis as an emergency drug. There is little experimental or clinical evidence to support the concept that acute pulmonary edema is a severe form of left ventricular failure, and much available evidence suggests that this is not true[3,6]. Certainly in the absence of preexisting heart disease little can be gained by using digitalis. On the other hand the increased cardiac out-put following the administration of digitalis to a patient whose heart is failing may lead to an alarming increase in pulmonary artery pressure with possible exacerbation of the difficulties already present. Digitalis preparations even when administered intravenously will not produce any effect for at least 15 minutes, therefore they cannot be considered one of the first drugs to use, and since there is uncertainty about whether they help or aggravate the pulmonary circulatory impairment there is good reason to avoid them altogether until after the acute episode has subsided. Then, if congestive heart failure is present, digitalis should be used, otherwise not.

Acute pulmonary edema is a whimsical disease so unpredictable that, in the event of improvement, one can never be certain that his measures have actually helped. Many physicians have observed that merely talking quietly to the patient or giving a hypodermic injection of sterile saline will bring about dramatic improvement. Thus evaluation of measures used to treat acute pulmonary edema must depend largely upon understanding the physiological derangements. As we learn more about these our ability to treat the disease will improve.

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Clinical Medicine

CANCER DETECTION OF THE BREAST AND LUNGS

David Lyall, M.D., *New York, N. Y.*

The subject of this paper is the early detection of cancer of the breast and of the lung and bronchus.

To discover early cancer of the breast, we must examine the breast frequently and routinely. This must be done systematically and not in a cursory abstracted fashion. The patient is first examined in the sitting position, of course stripped to the waist and with a tangential light. The breasts are lightly palpated and any lumps gently manipulated to see whether there is any deep or superficial connection as shown by attachment to the chest wall or dimpling of the skin. The arms are extended over the head or pressed against the hips to tense the pectoral fascia and demonstrate dimpling or nipple retraction. Any asymmetries are noted and differences in the position and mobility of the nipple are observed. The axillae are examined. The patient is then made to lie in a supine position and turned slightly away from the breast to be examined. This allows large mammary glands to flatten themselves out on the chest wall and encourages a systematic examination. Lumpy breast tissue flattens out and false positive examinations may be avoided. Small abnormal lumps can be dissociated from the rest of the mammary tissue in a more efficient way. Bidigital examination of the hanging breast is worthless.

If there is a history of discharge from the nipple, the circumareolar area is explored in a radial fashion with pressure in a centripetal way exerted so as to endeavor to locate the duct containing the discharge. Sometimes the enlarged dilated duct can be felt as a definite strand or if there is an intraductal papilloma this exhibits itself as a small nodule somewhere near the edge of the areola and palpable just below the skin. In this fashion such lesions can be localized and removed through small circumareolar incisions.

The use of transillumination has not proved of great value in our experience. Small solid lumps will have the light transmitted around them and large cystic tumors containg opaque fluid will show up as solid tumors. This we do not feel is an important differential procedure. The same is true of cytological examination of nipple discharge. This has not proved reliable in our hands. After the examination and while the facts are still fresh in one's mind, a diagram of the breast is made and all abnormal findings accurately located thereon for future reference. It is our duty as physicians and particularly as surgeons to maintain a high degree of suspicion of all irregularities felt in the breast particularly between the ages of forty and sixty.

All patients with eczematoid or other superficial lesions of the nipple or skin of the breast which do not clear up promptly, that is within a week or two with local medication, should be subjected to biopsy. This will pick up early cases of so called Paget's disease of the nipple. This should be called Paget's carcinoma for it is really a duct cell carcinoma arising in the central ducts near the nipple and causing the visible rash by infiltration in continuity.

The significance of discharge from the nipple should be explained before the case is abandoned and suspicion allayed. A few cases of nipple discharge comprise the group called mammary duct ectasia in which there is a low grade infection with dilatation and accumulation of debris and sometimes of purulent material. This may cause multiple abscess formation with fistulae and is generally cured by removing *en bloc* the fibrosed infected area with the involved ducts. Clear serous or bloody discharge is found more frequently and is usually due to some type of papillary growth within the breast or its ducts. The first type of papillary condition is the intraductal papilloma mentioned above. This is not very common, arising characteristically in the central portion of the breast and exhibiting friable papillary projections into the main channels. This lesion is accompanied in about seventy-five percent of cases by some type of nipple discharge. Approximately two-thirds of this seventy-five percent will show bloody discharge and the other third serous discharge. These are not precancerous lesions. The second, more common category of papillary disease and a greater clinical problem is the type of diffuse papillomatosis as-

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Read before the Connecticut Cancer Conference of the American Cancer Society. Hartford. March 18, 1959.

From the Department of Surgery, Post-Graduate Medical School. N.Y.U.—Bellevue Medical Center.

sociated with the later stages of so-called cystic disease of the breast, otherwise called fibroadenosis or by a number of other vague descriptive terms. Here, there is a diffuse process and there are many foci of proliferation. These masses are located peripherally in the breast and nipple discharge is much less frequent. This type of lesion is thought to be moderately pre-cancerous, I say moderately because there is apparently a factor of four to one in the incidence of cancer in this group as against the female population as a whole. Our policy with these patients is to examine them frequently at first and to biopsy any so-called "dominant lump". If the biopsy is negative, the patient is then examined four times a year. The third type of papillary disease is the papillary adenocarcinoma. This lesion creates a problem from the standpoint of the pathologist and the operating surgeon in differentiating it from benign papillomatosis. The pathologist has much difficulty in accomplishing this by frozen section and even with permanent sections such a distinction may be difficult. Cell morphology rather than architectural arrangement is the basis for diagnosis. I am sure that many cases are diagnosed as papillary adenocarcinoma of the breast which are actually advanced papillomatosis and are not malignant at the time of surgery. Our policy in such cases is to do a biopsy with frozen section and if there is any question to delay the definitive surgery until such time as permanent sections are available for examination.

If cancer of the breast is taken as a group, then the incidence of nipple discharge is between one and two percent. For this reason it is not necessary or desirable to do simple mastectomy for discharge from the nipple without tumor. Careful observation and removal of the involved segment of the breast for diagnosis will suffice. Another factor in favor of this conservatism is that the survival rate from papillary adenocarcinoma of the breast is higher than that for other types, running close to sixty percent.[1] If one takes the group of patients with discharge from the nipple, particularly bloody discharge, the incidence of cancer in that breast at the time of first examination or the chance of its developing later is probably less than five percent. This is another argument against performing so-called prophylactic simple mastectomy which is only very occasionally done in our clinic.

I do not believe that needle or punch biopsy of breast tumors is of value in making the proper decision in the individual case. Patients are all admitted to the hospital for biopsy and almost all of them are performed under general anesthesia. If very small lesions are biopsied under local anesthesia it is possible to lose them in the edema caused by the infiltration of anesthetic agent.

Although I was at first opposed to it, I have come to the conclusion that some women should be instructed in the art of self examination of the breast. This technique is described at length by Cushman Haagensen.[1] Within the last couple of years, I have seen a number of women who have picked up very early lesions after having instruction in self examination. Those women with cancerphobia or those with serious emotional instability should probably be repeatedly examined by the physician and not taught this procedure.

Cancer of the breast in the female is the most frequent of all cancers, not considering the non-metastasizing relatively benign basal cell carcinoma of the skin. Its incidence is almost twice that of the next most frequent cancer, that of the cervix. About four percent of all adult women develop the disease. What can we hope to accomplish by the early discovery of cancer of the breast? Studies by Michael Shimkin[2] and his co-workers conclude that with present methods of detection and treatment of cancer of the breast, if all patients had a delay of less than one month from apparent onset to treatment, a five year survival rate of sixty percent could be achieved. This is fifteen to twenty percent above the usual survival rate in treated cases and forty percent above the twenty percent survival to be anticipated among women with untreated breast cancer. Of late we have been subjected in the literature to the dangerous doctrine of "biological predeterminism". This would seem to show that it doesn't make any difference what you do to a malignant tumor, that its course is predetermined by its innate nature, and that any measures taken will be of small avail. There are many studies which negate this dangerous nihilistic theory. Tables I and II from our clinic[3] show that the five year arrest rate is inversely proportional both to the delay following discovery of a tumor and to its size.

Cancer Of The Lung And Bronchus

Cancer of the lung is on the increase and now has approximately the same incidence as cancer of the rectum and rectosigmoid. Most lung cancers are silent and produce no symptoms until far advanced. The so-called typical history of cough, hemoptysis, and pain usually indicates far advanced disease and incurability. About one half of all cases of lung cancer are inoperable when first diagnosed as indicated by one or more of the following findings: (1) distant metastasis, (2) hoarseness due to recurrent nerve involvement, (3) bronchoscopic evidence of inoperability, that is, involvement of the carina or trachea, and (4) the presence of bloody pleural fluid containing cancer cells.[4] The remaining fifty percent should be explored and about one half of these will be found to be non-resectable for technical reasons. Therefore, the resectability rate is about twenty-five percent of all cases seen and even here a large number will be found to be suitable for palliative resection only. The higher resectability rate reported by some clinics is probably based on the selection of early or doubtful cases for surgical referral.

The overall five year survival rate is in the neighborhood of five percent. In the resectable cases it is therefore about twenty percent. The non-resectable cases which represent three quarters of the total have an average survival time of nine months. Here again, a high index of suspicion coupled with aggressive diagnostic measures will lead to earlier discovery of cases. Physical examination is non-contributory in early cases with the possible rare exception of a bronchial wheeze. Some of these patients with early bronchial tumors are treated for asthma and precious months are wasted. If at operation, the cancer is found to be localized to the lung, there is an approximate thirty-four percent five year survival rate. If however, there is involvement of the regional nodes, this survivorship drops to seven percent, and if there are remote metastases it is in the neighborhood of one percent.

One must always be suspicious of unexplained recurrent pulmonary infection whether or not the x-ray shadow resolves after a period of waiting. The first sign of many pulmonary cancers is the so called atypical pneumonia. A diagnosis should also be established in all cases of asymptomatic x-ray shadows, the so-called "coin" lesions. Approximately thirty percent of these coin lesions are found to be malignant on exploration. These cases should all be subjected to early bronchoscopy with biopsy if the lesion can be visualized. Cell washings are taken and the cytology studied if the tumor is in an inaccessible place. If one gets a negative bronchoscopy and cell washing and if one's suspicions have not been allayed, then an exploratory thoracotomy should be done. For some reason, physicians are still loath to recommend this procedure to their patients, and are not aware of the fact that it can be done with approximately the same mortality as the exploratory laparotomy and with very little more morbidity. Biopsy of the prescalene lymph nodes is not a method for early diagnosis. If the scalene nodes are involved it is *a priori* an advanced case and the disease will have already spread to the upper part of the mediastinum. The same is true of the pleural biopsy which determines inoperability if positive. Cytological examination of the sputum is valuable if properly done so that bronchial mucus, rather than upper respiratory secretions are obtained. It has been suggested that if this were done as readily as urinalysis, many early cases would be turned up. One wonders if this and chest x-ray might not be done every six months on all males who are heavy smokers and who are between forty and sixty years of age. The average practitioner whether he be internist or surgeon should not hesitate to cause his patient the expense and inconvenience of undergoing these procedures if he hopes to improve his patient's chance for survival.

(The author wishes to thank Dr. Walter Fischer for his help in the preparation of the section on the thorax.)

DELAY	FIVE-YEAR ARREST RATE
Less than 1 month	76%
1 – 2 months	50%
2 – 6 months	34%
6 – 12 months	23%
1 – 2 years	20%
2 – 3 years	25%
3 years or longer	41%

TABLE I

(Modified from Eggers et al.) The influence of delay on the five-year arrest rate.

SIZE	FIVE-YEAR ARREST RATE
0.5 – 2 cm.	73%
3 – 6 cm.	24%
over 7 cm.	16%

TABLE II

(Modified from Eggers et al.) The relation between size of tumor and five-year arrest rate.

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Around The State

New Haven County

Harry Sigel, spoke on the use of electrocutaneometry in occupational eczema at the 4th International Conference on Electronics in Medicine at the Waldorf-Astoria in New York recently.

Naugatuck Valley Medical Society

The Naugatuck Valley Medical Society Woman's Auxiliary, under the direction of Mrs. Evelyn Petrie, President, is planning a community-wide fund raising ball in the fall. This holds promise of being one of the Valley's biggest social events since the 50th anniversary celebration of the Griffin Hospital, produced at the Ansonia Armory. The Professional Policy Committee, composed of Doctors John M. Renehan, Jack Galen, John M. Hoffer, Wilbur H. Hansen, and Jack Holden, will continue as the Naugatuck Valley Medical Society liaison committee to the auxiliary for this event.

Doctor's Office

Eugene H. Corley, M.D., announces the opening of an office for the practice of obstetrics and gynecology at 1026 Park Avenue, Bridgeport.

E. K. Faiaz, M.D., announces the opening of an office for the practice of obstetrics and gynecology at 701 Asylum Avenue, Hartford.

Stuart Falk, M.D., announces the opening of an office for the practice of urology at 8 Brewster Road, Bristol.

Henry F. Farrell, M.D., announces the opening of an office for the practice of orthopedic surgery and treatment of fractures at 24 Church Street, Torrington.

John A. Gariepy, M.D., recently reopened his practice as a general surgeon at 2875 Main Street, Stratford.

Philip T. Goldenberg, M.D., announces the removal of his office from 179 Allyn Street to 140 Woodland Street, Hartford.

Kamal Hassan, M.D., announces the opening of an office for the practice of general medicine, specializing in gynecology and obstetrics at 17 E. Hope Street, Stamford.

George B. Johnson, Jr., M.D., announces the opening of an office for the general practice of medicine at 2952 Main Street, Bridgeport.

John J. Lawrence, M.D., announces the opening of an office for the practice of internal medicine at 2660 Main Street, Bridgeport.

Harold D. Levy, M.D., announces the opening of an office for the general practice of medicien in association with his father, Dr. Nathan Levy at 140 Montowese Street, Branford.

P. F. Lombardi, M.D., announces the removal of his office from 46 Prospect Street to 120 Cooke Street, Waterbury.

Morgan F. Moore, M.D., announces the opening of an office for the practice of psychiatry at 32 Main Street, New Milford.

Thomas J. O'Neil, M.D., announces the opening of an office for the general practice of medicine in association with Dr. Kenneth L. Grevatt at Redding.

Arnold D. Pearlstone, M.D., announces the opening of an office for the practice of ophthalmology in association with Dr. Leonard Flom at 70 Reef Road, Fairfield.

John F. Piro, M.D., announces the opening of an office for the practice of general surgery at 156 East Avenue, Norwalk.

Timothy J. Regan, M.D., announces the opening of an office for the general practice of medicine at 668 Post Road, Darien.

John H. Small, M.D., announces the opening of an office for the practice of urology at 881 Lafayette Street, Bridgeport.

Philip A. Stent, M.D., announces the opening of an office for the practice of general surgery in association with Dr. William A. Ellis at 51 Gillett Street, Hartford.

John J. Sullivan, Jr., M.D., announces the opening of an office for the practice of psychiatry at 1845 Summer Street, Stamford.

Charles Zmijeski, Jr., M.D., announces the opening of offices for the practice of obstetrics and gynecology at 689 Asylum Avenue, Hartford and Mountain View Avenue, Avon.

WOMAN'S AUXILIARY

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AUXILIARY SCHEDULE

May 15, 1961—Organizational meeting

September 18, 1961—Board meeting—Mrs. George Rosenbaum's home, 16 Vardon Road, West Hartford, Connecticut

October 16, 1961—Semi-annual state meeting —Cliffside, C. C., Simsbury, Connecticut

November 13, 1961—Board meeting

January 8, 1962—Board meeting

February 5, 1962—Board meeting

March 12, 1962—Board meeting

April, 1962—Annual State meeting—Date and place to be announced

Volunteers from the Woman's Auxilliary to the Hartford County Medical Association assisted at the Preschool Vision Screening Clinic conducted at Hall High School, West Hartford, on May 20, 1961. This clinic was sponsored by the Connecticut Society for the Prevention of Blindness. The aim was to discover eye problems in four and five year old preschool children in order to gain early correction and give the children every advantage in their beginning school life. Of one hundred eighty-seven children screened, thirty were referred for further investigation. All the volunteers felt this a most gratifying and worthy project in which to have participated.

Convention Notes

Connecticut delegates to the Annual Convention of the Woman's Auxiliary to the American Medical Association were: Mrs. George J. Rosenbaum, Mrs. Morton Arnold, Mrs. Norman H. Gardner and Mrs. Paul W. Tisher, Alternates were: Mrs. Winston Hainsworth, Mrs. Dewey Katz, Mrs. F. Erwin Tracy and Mrs. Ralph Tella.

Puerto Rico was welcomed as a new member of the National Auxiliary.

All sessions were attended and have been reported in the *Connecticut Quarterly*.

The American Medical Research Foundation and the Scholarship and Loan Fund were each voted $10,000 by the National Auxiliary, in addition to the Auxiliary's contribution to A.M.E.F. of over $195,000.00.

The outgoing President, Mrs. William Mackersie left the following recipe for "Ways to a Doctor's Heart" (for successful Auxiliary Projects) as an inspiration for all members:

Dozens of inspired committee members
Pounds of Enthusiasm
Tons of Imagination
Generous measure of Stick-to-ivness
Seasoned with plenty of ginger
Serves 80,657 members.

Our new National President, Mrs. Harlan English developed her theme for the year "Speak Your Beliefs in Deeds" in a most inspiring inaugural address likening our auxiliary work to a wheel of action wherein each aspect of our work becomes part of it.

Book Reviews

TO MEET THE NEED by Evelyn Whittemore Woods. Publisher, Board Member Organization of Connecticut Public Health Nursing Agencies, Box 1450, 80 Crown Street, New Haven 6, Connecticut. 131 pp. $1.00.

REVIEWED BY DENIS S. O'CONNOR

From the small beginning of public health nursing in Connecticut in 1887, scarcely any area of the state now lacks its small, or large, group of nurses to provide this essential service.

The widespread coverage of public health nursing, the high quality of care, the progressive development and the uniformly high morale of the various groups is largely due to a small group of women serving as board members of their local public health nursing organizations who met periodically to compare notes of what each organization was doing, what the problems were and what was needed to meet the new developments of medicine and which eventually became the Board Members Organization.

It is the chronological history of this organization and those farsighted, devoted women who brought it about that constitutes the material of the forty years of the organization from 1919 to 1959.

Even this recorded history is not for the glorification of the individuals whose place in the sociological history of the state is already secure but rather as a possible means of furthering the work already begun.

It is the hope of the Board Members Organization and the author, Evelyn Whittemore Woods, that those who would know by what and whose efforts our present public health nursing service has reached its high estate will purchase the book not only for the historical material contained therein but also to help provide funds for public health nursing scholarships which are a vital need if we are to have the type of nurses required for this work.

Nursing education today is a basic training but the various special applications of this training requires further special education to fit the nurse for special situations.

The doctors whose problems have been so well served by our V.N.A. and P.H.N.S. organization should be especially interested in this project and it is hoped that the medical profession will stimulate others as well to show their appreciation to the Board Members Organization by promoting the sale of this little book.

ENCYCLOPEDIA OF MEDICAL SYNDROMES by Robert H. Durham, M.D., Paul B. Hoeber Medical Division of Harper & Bros. New York, New York 1960, 613 pp. $13.50.

REVIEWED BY DENIS S. O'CONNOR

When in the course of a medical lecture reference is made to a syndrome, the name of which is unknown to the hearer or when the content of a syndrome is only vaguely known to the hearer, much of the value of the lecture may be lost.

When one realizes that there are nearly a thousand recognized syndromes and that frequently these syndromes may have several synonyms it is not surprising that the average doctor may have an uncertainty about his knowledge of many of the commoner syndromes.

It is therefore with more than usual enthusiasm that this encyclopedia of medical synonyms, represting a compilation of symptom complexes hitherto unavailable has been greeted and will become a standard work of refernce not only in medical libraries but in every medical organization office and on the desk of every physician who at times must be puzzled by what seems to him to be a conglomeration of unrelated findings.

Arranged in alphabetical order with all their synonyms each syndrome is briefly but comprehensably described with references to more complete articles for those who are studiously inclined.

The index syndromes at the end of the book is classified according to syndromes with subheadings thereby making it easy to find any syndrome even though one might have forgotten the name of it.

This is a work-tool type of book which should be on the physician's desk for everyday use but it could also be a source of intellectual pleasure and progressive education by perusal in moments of leisure.

One should make a mental note to see this book in the commercial exhibits at the next medical meeting because to see it is to want it and its' possession will be a source of help and satisfaction.

MENTAL HEALTH OR MENTAL ILLNESS? By William Glasser, M.D., Harper & Brothers, Publishers, New York, New York, 1960, 203 pp. $3.75.

REVIEWED BY LOUIS H. NAHUM

This book is based upon a series of lectures on psychiatry to people who work in institutions within the California Youth Authority. The purpose was to make concepts of psychiatry understandable to these people so that they might apply the ideas presented to their jobs of working with delinquent adolescents. It is clear as one reads along however, that what the author considered constructive about his lectures namely the "simplicity and clarity of his" "new conceptual approach," became so simple that the whole structure of ego psychology was emasculated to the point of being merely a set of definitions and inaccurate ones at that. For example, what can one say about a concept of hysteria in which denial is the basic idea. Such a view is meaningless unless one talks of the symbolic meaning of the functions lost in order to attain a reduction of anxiety and conflict. Simplification can be very misleading in effect. For another example his description of prefrontal lobotomy claims that it reduces or eliminates the "wild emotions, a most inaccurate treatment of the subject.

There is a total lack of significient references. Of all the great and growing literature on ego psychology the one quote the author can think of is not from Freud, not from Anna Freud, not from Eric Erickson, but from Bertrand Russell who was a great mathematician and philosopher to be sure but hardly skilled in ego psychology.

The author talks about the ego as if it is an original concept of his, standing apart from the other mental agencies. In fact nowhere does he define the ego in a mental agency at all. To avoid the "psychiatric jargon", the apparent simplicity of language drains the concepts of their true meaning. Look at the author's definition on Page 23 of anxiety: "fear, discomfort uneasiness, guilt, apprehension or remorse. Where is the tension factor which Freud underscored about anxiety. Guilt is certainly not of itself anxiety. To develop anxiety out of guilt one must analyze the true motives of anxiety. But this would mean some deeper understanding of ego psychology and the mechanism of defence which is everywhere lacking in this book.

He talks much about the feeling of identity "I am I" as being built into the ego. But this defines nothing. It is pure tautology. Nowhere does one find the real explanation of identity problems particularly in the adolescent.

The book is a smattering of general knowledge without documentation or illustrative case reports. It is one in which definition is mistaken for explanation and substituted for real evidence.

There is little doubt that any audience could accept a lot more explanation in terms of dynamics than what the author has offered them, and in this regard he has really downgraded his listeners. It takes a great teacher to give full concepts, while talking simply.

The piéce de resistance is the statement that "dealing with the patients," history is not directly related to psychotherapy, "what is important is what is happening now". It is like saying that in treating a case of Rheumatic Fever it is not necessary to know how it came about as a sequel to streptococcus infection, that the patient has streptococcus in his throat. All you need to know to treat the disease is that he has fever and the joints are swollen. It is not necessary to know how a child became a delinquent or why. All that is necessary is a bit of magic to strengthen his ego. All you need to do is think interms of effective egos and presto you have converted the delinquent into a strong "effective ego".

It is dangerous to get rid of "psychiatric jargon". It forces one to write "simply" about concepts which are not explicable in the language of the terms used. It would have been far better to use the accepted language of psychiatry provided, as Freud himself did, one defines the terms used. Only in this manner of utilyzing language can one truly deal with the complexities of human psychological behavior.

This is a disappointing book. It left this reviewer uneasy. There is so much riches to be garnered from studies on psycho-dynamics but they will not be found in this book. In asking oneself the obvious question why this book did not reach the mark, I fear the real answer is that having rejected Freud and all modern psychoanalytic concepts and theory, the author was left with a few glib definitions and no real substance.

COLD INJURY. TRANSACTIONS OF THE SIXTH CONFERENCE. Editor, Steven M. Horvath, Department of Physiology, Lankenau Hospital Philadelphia, Pennsylvania. The Josiah Macy, Jr., Foundation Publications, 16 West 46th Street, New York. 359 pp., $6.50.

REVIEWED BY MALCOLM S. BEINFIELD

"Cold Injury" is a transcription of the transactions of the Sixth Conference on hypothermic reactions sponsored by the Josiah Macy, Jr. Foundation. The present volume, although published in 1960, represents the text of a five day conference held in July 1958.

The method employed is a direct transcription of the presentations and the attendant comments. None of the papers were read, but rather the subject matter informally presented from notes and slides. The reader feels that he is in the midst of a group and an active participant therein.

The subject matter is varied, reflecting the effort of the program committee to have a multi-discipline approach to the basic problem of hypothermia. "Cold Injury" is not an apt title of the volume in that the papers reflect a basic approach to hypothermic reactions rather than to injury per se.

Extensive experimentation is reported regarding the basic mechanisms of the homotherm to resist hypothermia and how these mechanisms can be surgically altered by ablation of varying portions of the central nervous system.

In contrast to the animal experimental situations discussed, there are several reports of the actual problems faced by the men at McMurdo Sound and the South Pole during "Operation Deep Freeze". Work tolerance and epidemiology of disease in environments of up to minus 102 degrees fahrenheit are presented by clinicians and scrutinized and evaluated by the physiologists present.

Energy balance in cold environment is discussed. Controlled experiments utilizing volunteer soldiers who resided in a temperature regulated chamber for seven weeks are reported. The caloric intake, body weight, acid-base balance and electrolyte variations are recorded. It is demonstrated that caloric expenditure, everything else being equal, is increased during cold exposure, which does not induce hypothermia.

The caloric intake of persons exposed to sub-zero climates is 50 per cent qreater than those residing in the tropics.

The biologic applications of reduced temperatures can be more intelligently utilized if the physiological alterations are understood. Hypothermia is becoming an increasingly important modality in our therapeutic armementarium. This volume combines the efforts of the clinician and the basic scientist to advance the horizon of knowledge of cold responses.

OBSTETRICS, 12th edition by J. P. Greenhill, M.D., W. B. Saunders Company, Philadelphia and London, 1960, 1098 pp. $17.00.

REVIEWED BY DANIEL H. ADLER

This volume is the twelfth of a tried and true classic which originally appeared in 1913 and which was then the work of the Master, Joseph B. De'Lee. Dr. Greenhill makes note of this in the subtitle: "From the Original Text of Joseph B.

De'Lee, M.D." This edition, however, departs from the previous ones in its use of a new approach; many chapters written by collaborators, each with a particular interest in his special field within the broad scope of obstetrics. There are some twenty-three chapters of the total eighty that are written by these prominent contributors. This format has the advantage of perhaps a more thorough approach to particular aspects of a broad subject. It does lend a variety of interest as well.

This volume is exceptionally complete covering every aspect of obstetrics in depth, with perhaps too much space devoted to some few measures that are solely of historical interest. One notices, too, that an occasional old bit of obstetric lore is reported uncritically as in the chapter on preparations for delivery and the response to patient's call: "a prolapsed cord or bleeding may require a visit to her home before she is sent to the hospital."—This is unsound advice.

Some of the new chapters, particularly fetal erythroblastosis the Rh and other blood factors, endocrine diseases and pregnancy, and medicomoral problems are of especial interest. Such an advance as the Shirodkar operation for an incompetent cervicalis is described with excellent plates. This book also has the distinction of being eminently readable; this is not always so in a standard textbook of such scope. The bibliographies are such as would delight the most avid reader.

This volume is an important edition to the library of both practising specialist and interested student.

GENETICS AND CANCER. A collection of papers presented at the Thirteenth Annual Symposium on Fundamental Cancer Research at the University of Texas M.D. Anderson Hospital and Tumor Institute. Edited by the Staff of the University of Texas M.D. Anderson Hospital and Tumor Institute, University of Texas Press, Austin 1959, 447 pp. $8.50.

REVIEWED BY HERBERT A. LUBS, JR.,

"The important thing here is that the virus theory and the mutation theory of cancer genesis are converging." This statement by Andervont in the closing summary of a Symposium held in 1958 aptly presents the major theme and aim of this collection of 23 papers. The book is worthwhile not only as a source of present thinking on carcinogenesis but as an excellent review of basic genetic mechanisms.

The significance of these mechanisms is particularly clear when discussed in the light of abnoral cell growth and cancer that results from a variety of alterations in the nucleic acids. Several findings have particular significance in the understanding of the host-virus relationship. The mouse mammary tumor agent, for example, has been shown to be a virus not only by its behavior but by electron microscopy. Several types of viral incorporation into the bacterial DNA are well known. Haas concluded that there was good evidence that both mutation and carcinogenesis involve DNA which is being actively synthesized. Although some relation to the degree of malignancy and unusual chromosome number can be shown in tissue culture, Levan emphasized that our knowledge of the chromosome number of tumors in man is very scanty and the clinical role of polyploidy can therefore not be evaluated. At the clinical level the finding of a two to threefold increase in the frequency of gastric cancer in the relatives of patients with gastric cancer, and similar findings in the female relatives of patients with breast cancer was debated by Schull, Macklin and Oliver without reaching agreement. There seems little doubt, however, that certain rarer cancers are inheritable; retinoblastoma and intestinal polyposis as dominant characters, and xeroderma pigmentosum, which progresses to cancer on exposure to light as a recessive. These are a random selection of many significant findings that were presented, and many more chapters including Bonner's exposition of gene action are particularly outstanding. The chapters are uniformly well written and clearly illustrated by an able group of contributors and the book is heartily recommended.

Haldrone And Celestone

Two new drugs—paramethasone acetate (Haldrone-Lilly) and betamethasone (Celestone- Schering), both analogues of methylprednisolone—have been added to the list of anti-inflammatory steroids available to physicians. (Haldrone is the 6-alpha-fluoro, 16-alpha analogue, and Celestone the 9-alpha-fluoro, 16-beta analogue). The manufacturers of Haldrone call it "a significant achievement in corticosteroid research," and Celestone is claimed to provide "enhanced anti-inflammatory effect with the use of lower dosages." Nevertheless, an examination of both published and unpublished clinical and metabolic reports and of the manufacturers' literature does not show that these new steroids offer significant advantages over prednisone and other corticosteroids either in effectiveness or in frequency or severity of side effects.

With all of the corticosteroids, the risk of certain toxic, metabolic and other unwanted effects is incurred, and with a new corticosteroid there is always the possibility of new side effects. Among the serious side effects encountered with all corticosteroids are demineralization of bone, disturbances of protein and carbohydrate metabolism, and serious mental aberrations. Cortisone and hydrocortisone are also responsible for retention of salt and water. Prednisone and the newer steroids have the advantage of producing less retention of salt and water, an advantage that marked an important advance in anti-inflammatory steroid therapy. But no other clear dissociation of objectionable effects from the desired anti-inflammatory effects has been obtained in any of the analogues of cortisone, including the new ones.

Reprinted from The Medical Letter on Drugs and Therapeutics, New York, N.Y.

OBITUARY

Frederick W. Roberts, M.D.
1900 — 1961

Fred Roberts was the son of the Rev. William Roberts, and was a true and typical son of his New England heritage. He attended New Haven Schools, including Hillhouse High School, and received his collegiate education at Yale, where he graduated in 1920. He studied medicine at the Johns Hopkins Medical School, receiving his Doctor's degree in 1924, and completed his graduate training at the New Haven Hospital, in his home city. He spent his entire professional life in the practice of surgery in his home community, with the exception of his periods of Service with the Navy in both World Wars.

Dr. Roberts was an earnest, energetic man with a great enthusiasm for the life work which he had chosen. He was one of the founders of the New Haven Branch of the American Cancer Society, and was its first president. He served his community whenever and wherever the call came. The New Haven Medical Association was grateful for his management of many phases of its affairs, particularly, the House Committee. He spent much of his free time at his country place in New Hampshire. Indeed, it was there that his life ended on the July 4th week-end of this year from a coronary occlusion. His fellow members in medical groups and his community, share the grief of his widow, the former Janet Cheney of Milford, his son, Dr. John Roberts, at Duke University, and his daughter, Mrs. Frances Wilson.

An upright citizen, a devoted physician, he will be missed by all who knew him.

Maxwell Lear, M.D.

In Memoriam

DiBlanda, Harry D. — Weston; New York Medical College, 1932; Dr. DiBlanda was the first resident physician in Weston; he served as a member of the medical staff of Norwalk Hospital and as director of health for Weston since 1947; he entered the Army Medical Corps in 1942 and served at stations throughout the United States; died at Norwalk Hospital, July 23, aged 55 years.

Radin, Morris J. — Hartford; Columbia University College of Physicians and Surgeons, 1916; Dr. Radin was one of the ten founders of Hartford's Mt. Sinai Hospital, which bears the name he suggested; he served as chief of the medical staff at that hospital in 1952 and was a member of the courtesy staffs at Hartford Hospital, St. Francis Hospital, and McCook Memorial Hospital; he served as a captain in the Army Medical Corps in World War I; died July 22 at Hartford Hospital following a brief illness, at the age of 70 years.

Seabury, Robert B.—Harvard Medical School, 1918; Dr. Seabury was for many years associated with the Yale University School of Medicine and the Department of University Health; he was well known as a physician for the Yale football team, a position which he held from 1920 until the fall of 1953; in 1919 he served as clinical instructor in surgery at Yale and in 1921 became assisting surgeon and medical examiner for the Department of University Health; he maintained an office for the practice of traumatic surgery; died July 13 at his home while recuperating from a heart operation, aged 67 years.

Valuable Vaccine Found For Staph Infections

A vaccine against staphylococci, infection-causing bacteria, brought an "excellent response" in 44 of 60 patients, two Washington, D. C., researchers reported recently.

The vaccine was termed "a valuable therapeutic agent" for recurring, persistent, or severe staph infections by Kenneth L. McCoy, M.D., and Eugene R. Kennedy, Ph.D., of Washington's Providence Hospital, in the current Journal of the American Medical Association.

In 44 cases, the patients had a rapid clearing of the infection and freedom from reinfection for six months or longer, the authors reported. Eleven patients had an initially favorable response followed by a recurrence of the infection which could be controlled again by the vaccine. The other five derived no observable benefit from the vaccine.

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Special Notices

DEPARTMENT OF EPIDEMIOLOGY AND PUBLIC HEALTH

During the current academic year the Yale University School of Medicine has launched its new Department of Epidemiology and Public Health. This department was organized with the view that Yale could make a significant contribution in the field of public health if its resources, previously spread over a broad area, were concentrated on a more limited objective. Of the several subdivisions of public health, the ones which seem to offer the greatest challenge, now and in the forseeable future, are epidemiology and its sister science, biostatistics. Epidemiology not only offers the greatest opportunity for the scientific development of public health but also offers a broad field for research and provides an area of common interest with clinical medicine.

The new department combines the Department of Public Health and the Section of Epidemiology and Preventive Medicine. This reorganization resulted from a plan developed in 1959 when the school faced the imminent retirement of two professors, Dr. Ira V. Hiscock, who retired in January 1960, and Dr. John R. Paul, who retired in July 1961.

The Department of Public Health was founded in 1915. Its primary responsibility has been instruction of graduate students, and over the intervening 45 years more than 600 degrees have been awarded. Of these, slightly more than 90 percent were degrees of master of science or master of public health, usually, following a one-year course, and about 7 percent degrees of doctor of philosophy or doctor of public health after longer periods of study. During the first 30 years of its existence, the department was headed by Dr. C. E. A. Winslow. In 1945 Dr. Hiscock, who had been a member of the faculty since 1920, was appointed chairman.

The Section of Epidemiology and Preventive Medicine was organized in 1940 with Dr. Paul as chairman. Although never formally a department in the school, it nevertheless had departmental status because the volume and importance of its activities made management within the Department of Internal Medicine too cumbersome for efficiency. In addition to instruction of medical students and graduate students, major emphasis has been placed upon research in epidemiology, virology, and immunology and particularly in developing the concept and techniques of serologic epidemiology and its potentialities in the field of geographic medicine and international health. Large numbers of post-doctoral fellows and more senior research workers from all over the world have been attracted to its laboratories for periods of a few months to several years.

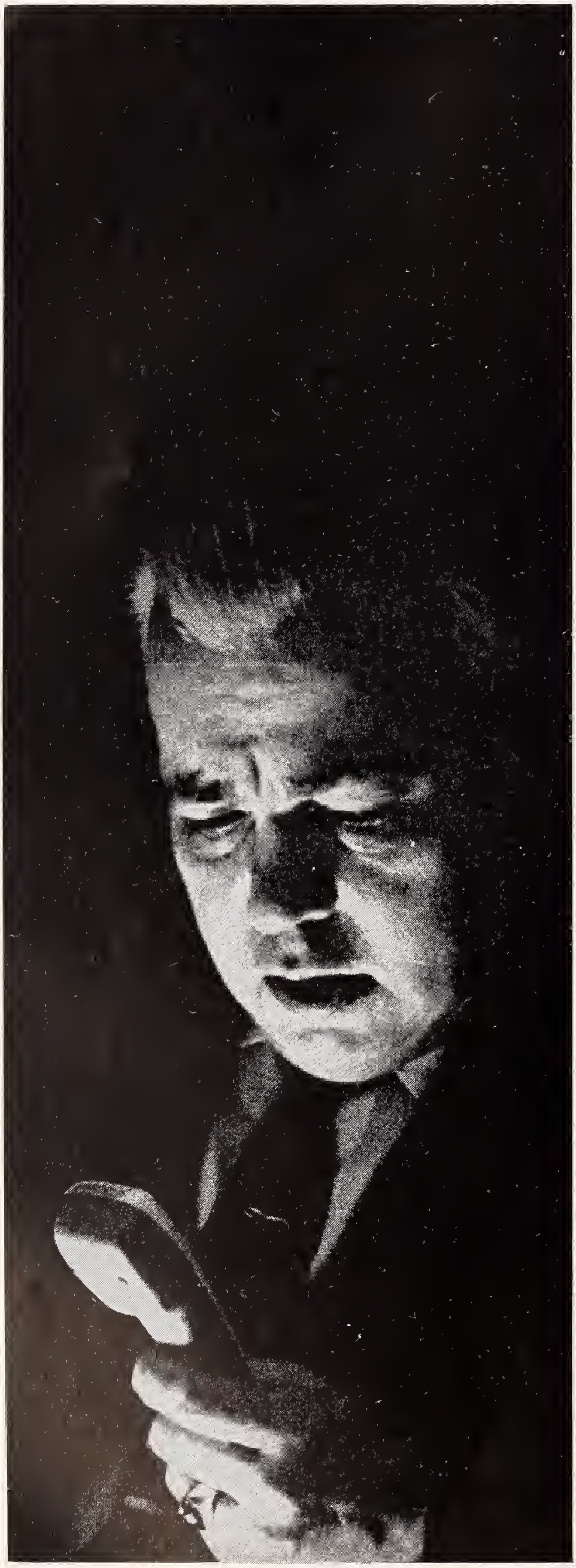
The new Department of Epidemiology and Public Health will be concerned with instruction of both medical and graduate students and will pursue a vigorous research program in epidemiology and biostatistics. Epidemiology is defined as "the study of all factors and their inter-dependence which affect the occurrence and course of health and disease in a population." Thus epidemiology is the study of man in relation to his total environment. The importance of insisting on this wide definition is not only that it covers the biological aspects of non-communicable as well as communicable disease in populations, but it also includes the environmental, social, and behavioral factors which play such an important role in the health of populations.

Teaching and research in epidemiology and biometry are in line with the general University policy of providing education at a high scientific rather than a vocational level. However, because of the University's obligations to the nation at large, adequate teaching of the practical applications of these sciences will be provided so as to better equip students for the practice of the profession of public health. In view of the long-standing interest of the University in international activities, special emphasis will be given in the program to meeting the growing needs for research and for men trained in the international aspects of epidemiology and public health.

It is the function of this new program to train in selected public health fields specialists who are oriented to research and to the development of new and improved methods to meet the challenges facing public health in the coming generation, specialists who will become leaders in the future. Such training in depth cannot be obtained in one year. It has been decided, therefore, that eventually a training period of two years and the completion of a satisfactory thesis based on original study of an approved subject will be required for the master of public health degree. Depending upon qualifications and past experience, selected candidates who hold doctoral degrees may be admitted in advanced standing and allowed to proceed to the degree in one year. It is hoped that young doctors of medicine with an interest in epidemiology, biometry, and public health will be attracted by the unusual opportunities of this new program. Fellowships in traineeships will be available for qualified applicants.

Since it is the aim of the department to train future leaders in the field, special opportunities will be offered to students who wish to proceed to the degrees of doctor of public health and doctor of philosophy in epidemiology or biometry. It is planned to develop arrangements with universities and other institutions overseas so that research projects leading to a dissertation may be conducted in that part of the world where the problem in question can best be studied.

The chairman of the new Department of Epidemiology and Public Health is Dr. Anthony M.-M. Payne, who was appointed Anna M. R. Lauder Professor of Public Health last year. Dr. Payne is noted for his direction of worldwide studies on virus diseases. He was educated at Wellington College and Cambridge University. Prior to joining the Yale faculty in July 1960, he was chief medical officer for endemo-epidemic diseases of the World Health Organization in Geneva.



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THE GREATER BRIDGEPORT CHAPTER OF THE CONNECTICUT ACADEMY OF GENERAL PRACTICE

announces a

Post-Gradute Course in *"Dermatology for the General Practitioner"* which will be given by the Dermatology Department of Yale University.

Lecturers will be:

Marie-Louise Johnson, M.D., Assistant Professor of Medicine (Dermatology).

Joseph McGuire, M.D., Assistant Professor of Medicine (Dermatology).

Irwin M. Braverman, M.D., Research Fellow in Dermatology.

The lectures will be given at 9:00 P.M. Mondays in Bridgeport Hospital:

September	25	Diagnosis and Therapy of Skin Diseases.
October	2	Lupus Erythematosus and Photo Sensitivity.
	9	Papulo-Squamous Eruptions.
	16	Skin Tumors.
	23	Eczematous eruptions.
	30	Infections of the skin incl. Acne.
November	6	Pigment Disorders.
	13	Cutanoeous Manifestations of Internal Diseases.
	20	Concluding Survey and Diagnostic Problems.

Credit in Category I will be given to members of the AAGP. The fee for this course will be $25.00. Interns and Residents may attend without any charge. For further information write to Frank F. Northman, M.D., Secretary, Bridgeport, Bpt. Chapter CAGP, 1884 Park Avenue, Bridgeport, Connecticut.

THIRTEENTH POSTGRADUATE ASSEMBLY IN ENDOCRINOLOGY AND METABOLISM

Under the Co-Sponsorship of The Endocrine Society
and The National Institutes of Health
Bethesda, Maryland
October 2-6, 1961.

A comprehensive review of clinical endocrine problems and current research activity in these areas will be presented. For further information, write to: Dr. Roy Hertz, National Institutes of Health, Building 10, Bethesda 14, Maryland. The fee will be $100.00 for physicians, with a reduction to $30.00 for Residents and Fellows. Enrollment limited to 100.

NEW YORK DIABETES ASSOCIATON

The New York Diabetes Association will hold its ninth annual all-day symposium on December 1, 1961, at the Hotel Pierre, 61st Street and Fifth Avenue, it has been announced by Dr. Gerald Freidman, Chairman.

The Symposium will offer a program on "Insulin and Its Use," featuring the following subjects:

Chemistry of Insulin.
Mechanism of Action of Insulin.
Insulin Antibodies.
Electron Microscopy of Islet Cells.
Effect of Insulin on Protein Metabolism.
The History of the Discovery of Insulin.
The Clinical Impact of Insulin.
Symposium on the Effect of Insulin on the Liver.

Physicians, medical students and other professional personnel interested in diabetes are welcome to attend the Symposium. There is no registration fee. Advance registration is required and may be made by calling the New York Diabetes Association, 104 East 40th Street, New York 16, New York.

HARTFORD HOSPITAL

Saturday Morning 11 O'clock Guest Speakers

September 21 to December 30, 1961

Sept. 21-23 (Three Day Visiting Surg.)—Claude E. Welch, M.D., Associate in Surgery, Harvard
Sept. 23 9:00 A.M. Surgical Conference
10:00 A.M. Surgical Ward Rounds
11:00 A.M. "Difficult Problems in Abdominal Surgery"

Sept. 30—S. J. Thannhauser, M.D., Professor of Medicine, Emeritus, Tufts
Subject: "Case Presentations"

Oct. 5-7 (Three Day Visiting Surg.)—Mr. R. W. Raven, M.D., Royal Marsden Cancer Institute, London
Oct. 7 9:00 A.M. Surgical Conference
10:00 A.M. Surgical Ward Rounds
11:00 A.M. "Melanoma"

Oct. 14—Lester Adelson, M.D., Pathologist & Chief Deputy Coroner, Cuyahoga County, Cleveland
Subject: "Sudden and Unexpected Death in Infancy & Childhood"

Oct. 21—Mr. Murray A. Falconer, M.D., Maudsley Hospital, London.
Subject: "Cerebral Aneurysms and Temporal Lobe Epilepsy"

Oct. 28—John Van S. Maeck, M.D., Professor of Ob-Gyn, Univ. of Vermont
Subject: 10:00 A.M. "Vaginal Physiology"
11:00 A.M. "Ovarian Tumors"

Nov. 4—Frank E. Whitacre, M.D., Professor of Ob-Gyn, Vanderbilt
Subject: 10:00 A.M. "Bleeding Tendencies in Pregnancy"
11:00 A.M. "Amenorrhea"

Nov. 11—Priscilla White, M.D., Joslin Clinic; Asst. Professor of Pediatrics, Tufts
Subject: "Diabetes in Youth"

Nov. 18—Paul B. Beeson, Professor of Medicine, Yale
Subject: "Pyelonephritis"

Nov. 25—Philip LeCompte, M.D., Pathologist, Faulkner Hospital; Asst. Professor of Pathology, Harvard
Subject: "Vascular Disease in Diabetes"

Nov. 30-Dec. 2—Charles Rob, M.D., Professor of Surgery, Univ. of Rochester
Nov. 30 Surgical Rounds and Conference
Dec. 1 Surgical Pathology Conference
Dec. 2 9:00 A.M. Surgical Conference
10:00 A.M. Surgical Ward Rounds
11:00 A.M. "Endarterectomy in Vascular Disease"

Dec. 9—Clyde L. Randall, M.D., Professor of Ob-Gyn, Buffalo
Subject: 10:00 A.M. "Obstetrical Statistics"
11:00 A.M. "Endometriosis"

Dec. 16—Norval Christy, M.D., Pakistan (H.H. '46-'47)
Subject: 10:00 A.M. "Ob-Gyn in Pakistan"
11:00 A.M. "Medical Problems in Pakistan"

Dec. 23—NO CLINIC—Holidays

Dec. 30—NO CLINIC—Holidays

AMA CLINICAL MEETING NOVEMBER 26-30 AT DENVER

The 15th annual clinical meeting of the American Medical Association will be held November 26-30, at Denver, with a program geared to basic problems of medicine faced by physicians in their practice.

An outstanding scientific program, with emphasis on new research developments, has been planned under the direction of Samuel P. Newman, M.D., Denver, chairman of the AMA's Council on Scientific Assembly.

Some highlights will include sessions and papers on such important areas of medicine as genes and chromosomes, electronics and computers in medicine, space medicine, medical aspects of American habits, new developments in virology, treatment of radiation injuries, new findings in chemotherapy for cancer and latest data in the field of antibodies and antigens.

AMERICAN CANCER SOCIETY MEETS OCTOBER 23-24

The annual meeting of the American Cancer Society will be held at the Hotel Biltmore in New York, October 23-24 and will be devoted to THE PHYSICIAN AND THE CANCER PATIENT. The speakers will be national authorities on the different phases of this important subject. *All* doctors are invited.

Connecticut Medicine urges all doctors to give serious consideration to attendance at this meeting so conveniently located and concerning a subject on which every doctor must be aware of the most recent developments.

1961 MEETINGS

Sept. 25-26-27-28 — 63rd Annual Meeting of the American Hospital Association. Convention Hall, Atlantic City, N.J. For information on hotel reservations, write: American Hospital Association, 840 North Lake Shore Drive, Chicago 11, Illinois.

Sept. 27—36th Connecticut Clinical Congress, Mary S. Harkness Memorial Auditorium, Yale School of Medicine, New Haven.

Sept. 28 — Annual Meeting, The Connecticut Society of American Board Obstetricians and Gynecologists, Inc., at the New Haven Lawn Club, 193 Whitney Avenue, New Haven at 5:00 P.M.

Oct. 5-6-7—District No. 1 meeting of the American College of Obstetricians and Gynecologists at the Jimmy Fund Bldg., Childrens Medical Center, Longwood Ave., Medical School and Hospital area, Boston.

Oct. 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

Nov. 1—Symposium on Rheumatic Fever—Harkness Memorial Auditorium, Yale University School of Medicine, 333 Cedar Street, New Haven, 9:30 A.M.-3:30 P.M.

Nov. 6-7-8 — New England Postgraduate Assembly, Statler Hilton, Boston.

Nov. 27-30 — Clinical Meeting, American Medical Association, Denver.

Dec. 1 — New England Health Education Association—Fall meeting at 1200 Beacon St., Motel, Brookline, Mass.

1962 MEETINGS

May 3-4 — New England Health Education Association—Spring meeting—Andover Inn, Andover, Mass.

May 18-19 — Connecticut Society American Board Obstetricians and Gynecologists Travel Club meeting in Montreal.

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Automation In Medicine

Medical technology put machines and instruments to work at an unprecedented rate during 1960 to serve mankind.

Modern technology is a force which brings together machinery and equipment, skills and techniques, men, money, and methods, and how far it will go in 1961 and years thereafter no one can predict.

Dr. E. Vincent Askey, Los Angeles, president of the American Medical Association, said that "in clinics, hospitals, and research centers throughout the country medical technology and its twin, automation, are presently helping to save not only hand and muscle energy, but mental energy as well.

"From the work taken over by new machines, instruments, and complex devices, especially during 1960, the future of automation in medicine looks bright," he added. "Everything in this field is designed to help the sick in some way, and prolong life."

Technology already has extended the range of a physician's vision to vistas undreamed of only a few years ago. Man's ear, for example, once heard little beyond the cry of birds. Recent engineering developments to medical research and clinical diagnosis make it possible to record data within and beyond human sensory capabilities by lightweight sensing, measuring, timing, amplifying, and transmitting devices.

Much of the heart sound data useful for diagnostic purposes lies below the frequency range and intensity detectable by the human ear, but today new measuring devices can easily detect these frequencies.

Engineering developments and techniques that became available for medical application in one way or another during 1960 included:

—Development of a simple, eight-part stapling device that enable the surgeon to connect severed blood vessels rapidly with stainless steel staples.

—An apparatus, dubbed the "kidney cooler," which refrigerates and preserves human kidneys during surgery on those organs. The kidney function, which deteriorates rapidly at normal temperature when blood supply is interrupted, is thus preserved until circulation is restored. In clinical tests the kidney cooler allowed at least twice the amount of time formerly required to perform an operation. It reduced the blood loss and the amount of blood present in the area of the operation.

—A heart-lung machine that automatically holds blood flow to rates desired in open-heart surgery.

—A system of x-ray fluoroscopy that utilizes the television image tube to deliver a fluoroscopic image of brightness up to 1,000 times greater than currently obtained and that drastically reduces the amount of radiation exposure to the patient. The new method enables entire teams of consulting physicians to view the diagnostic x-ray images in a normally lighted room through a device that resembles a console-model television set.

—A Japanese camera that photographs the inside of the human stomach. The camera, the size of the tip of an index finger, can photograph ulcers, gastritis, stomach cancers, and help in establishing more accurate diagnosis of stomach disorders.

—A device that accurately controls the rate and flow of certain fluids, blood, and drugs. It delivers precisely-measured quantities of fluids over specific time periods and is especially appropriate in administering medication to infants, old people, and the seriously ill.

—A new psychiatric study device that permits up to 200 medical students to observe interviews with neurotic and psychotic patients on a closed-circuit television system. It is considered superior to the use of the conventional one-way viewing mirror. Students, seated in a well-ventilated and softly lighted conference room, have the benefit of two-way participation and note-taking during the interview.

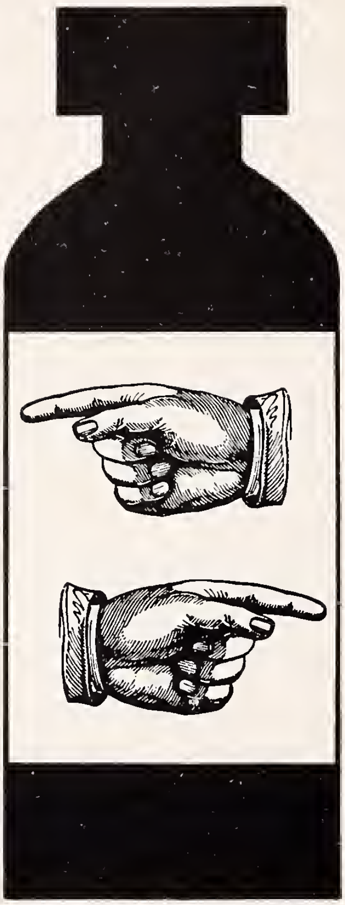
—An electronic digital computer that assists in the search and correlation of larger quantities of clinical data. The process permits the recording and storage of medical data ranging from the most precise laboratory values to the informative impressions of the physician as well as all supplementary laboratory data concerning the patient.

—A unique monitoring device, made up of a number of specially adapted standard diagnostic instruments, helps physicians tide acutely ill patients over crises. A battery of instruments on a specially equipped unit makes it possible to monitor simultaneously changes in blood chemistry, fluid balances, blood pressure, and other suddenly occurring chemical and physiologic events that demand immediate recognition and correction.

—A highly sensitive, automatic detector that can be moved over the entire body of a patient to map and measure the distribution of gamma-emitting isotopes in bone, a valuable aid in early diagnosis of some forms of bone cancers.

—An artificial kidney that perfuses a patient's blood through a column of synthetic resin and selectively removes potassium, ammonium, calcium, and magnesium more swiftly than standard devices now in use.

—An eye-camera device, fitted into a helmet, that records precisely where a patient's eyes are focused. It is a valuable aid not only for studying certain visual defect, but is also used for studying the focusing patterns of automobile drivers and students in an effort to determine how their visual alertness might be improved.



Trademarked drugs . . . or "drugs anonymous"?

In the field of medicine, as almost everywhere else in a free economy, the trademark concept has evolved over the years. As with most human institutions, there are some who may not consider it ideal; but it has brought about three signal benefits:

To the physician it gives assurance of quality in the drugs he prescribes—assurance backed by the biggest asset of the maker, his reputation.

To the manufacturer it gives one of the greatest possible incentives to produce new and better curative agents.

To the pharmacist it gives preparations which he can dispense with confidence.

If trademarks are done away with, a whole new setup must be created:

1. An enormously expanded, expensive system of government quality control.
2. A new system of generic nomenclature which would magically turn out names not only rememberably simple, but also conforming to the principles of complex chemical terminology.
3. Something new to fill the gap left by the elimination of the trademark incentive to produce new and better drugs.

The American system has been pre-eminent in producing and distributing good medicines. Above all it has been successful in creating new advances in therapy. In a dubious effort to provide cheaper medicines by abolishing the trade names upon which the responsible makers stake their reputations, let us beware of sacrificing this success.

This message is brought to you on behalf of the producers of prescription drugs to help you answer your patients' questions on this current medical topic. For additional information, please write **Pharmaceutical Manufacturers Association,** *1411 K Street, N. W., Washington 5, D. C.*

A.M.A. Reiterates Belief In Effectiveness Of Salk Shots

The Council on Drugs of the American Medical Association today reiterated its belief in the effectiveness of the Salk polio vaccine.

The Salk vaccine "is now well established as one of the most effective vaccines of any kind presently available," the council said in a statement in the recent Journal of the American Medical Association.

The council urged the vaccination of every unvaccinated person with Salk shots, especially those under 40 years of age.

The statement included the following findings of a special committee on poliovirus vaccines of the council, which recently reviewed past experience with the Salk vaccine in the United States and other countries:

—Salk vaccine repeatedly was found to be at least 80 per cent effective when 3 or more doses were given. With one exception, studies of polio outbreaks revealed that the disease occurred primarily in the unvaccinated. The only significant exception, an outbreak in Massachusetts, apparently could be correlated with an exceptionally widespread use of Salk vaccine in Massachusetts in 1956 at the time when the potency of the vaccine was lowest.

—The potency of the vaccine has been rising steadily for the past two years; therefore, the relatively unsatisfactory results which have sometimes appeared in the past need no longer be expected.

—Effectiveness similar to that reported in the United States has been observed in a number of other major countries in which it has been used, in which 75 to 90 per cent protection has been reported, according to the latest report of the World Health Organization.

"The live poliovirus vaccine is now under study, but the fact that this vaccine will not be available for use in 1961 emphasizes the need for utilization of the Salk vaccine," the statement concluded.

The A.M.A. joined forces with the U.S. Public Health Service and the National Foundation in a campaign to get the unvaccinated 40 per cent of the nation's population inoculated.

External Heart Massage Successful In 62 Cases

The successful use of external massage in restoring the heart beat of 62 patients was reported in a recent Journal of the American Medical Association.

Reports from Baltimore and Charleston, S.C., confirmed the findings of a group of Johns Hopkins researchers who discovered that the heart could be revived by pressure applied externally to the heart area of the chest.

The technique consists of applying rhythmical pressure on the lower part of the victim's breastbone. One hand can exert enough pressure for a child, but both hands and greater pressure are needed for an adult.

Drs. Peter C. Gazes and John A. Boone, Medical College of South Carolina, reported that the method provided adequate circulation to sustain the heart and central nervous system in 20 patients. The duration of the massage ranged from less than a minute to an hour and five minutes, they said.

Drs. Peter Safar, Torrey C. Brown, Warren J. Holtey, and Robert J. Wilder, Baltimore City Hospitals and Johns Hopkins School of Medicine, reported that their experience with 42 patients confirmed the efficacy of the technique in restoring the heart beat and blood circulation.

However, they said, the technique cannot be relied upon to ventilate the lungs even if the victim has an unobstructed airway.

Therefore, they said, external cardiac massage should be preceded and accompanied by artificial respiration because restoration of the heart beat without respiration is futile and many patients recover after artificial respiration alone.

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Some Headache Remedies May Be Over Priced

Americans may be wasting money by buying fancy, high-priced aspirin preparations instead of plain aspirin.

Americans spent three times as much for painkillers that combine aspirin with other ingredients than they did for plain aspirin in 1959, the article said. A total of $69,000,000 was spent for plain aspirin while $213,000,000 was spent for other aspirin preparations.

"In recent years plain aspirin has had screaming competition from other preparations," the article said.

"One of the most popular of these are the so-called buffered aspirins which sell for almost twice as much as the most expensive plain aspirin. Buffered aspirins are no more than plain aspirin plus a pinch or two of antacid salts.

"The fizzing headache cures which are vastly more expensive are essentially buffered aspirin, with some citric acid added to make bubbles."

The article cited several scientific studies that indicated the antacids in buffered aspirin serve no useful purpose.

Another popular aspirin preparation, aspirin-phenacetin-caffeine (APC), sells for about double the price of the most expensive plain aspirin, the article pointed out.

"Phenacetin (or acetophenetidin) parallels aspirin's pain-relieving powers, while the caffeine is designed to exert a mild central stimulating effect," it said. "Actually, APC is just as effective as aspirin. At the same time, phenacetin is more toxic than aspirin."

Acetanilid, a compound related to phenacetin, is used in place of aspirin in some headache remedies, the article continued, but it is "*far* more toxic than aspirin."

Although aspirin is considered a relatively safe drug, it said, any drug powerful enough to do good also has the potential to harm.

The following rules were offered as a guide to aspirin usage:

—If dosage must be repeated several times a day for several days to relieve pain, a physician should be called.

—Do not take aspirin to reduce fever without consulting a physician.

—Aspirin should be taken with a full glass of water and not on an empty stomach.

—Aspirin should be thrown out when the medicine bottle smells of vinegar or the tablets fall apart.

—Aspirin should not be taken by persons with a stomach ulcer.

CONNECTICUT MEDICINE

Connecticut State Medical Journal

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An Experimental Approach To The Treatment Of The Acutely Ill Psychiatric Patient In The General Hospital 613
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*References available on request.

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CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100. See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after both short-term and prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, or viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes, such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.

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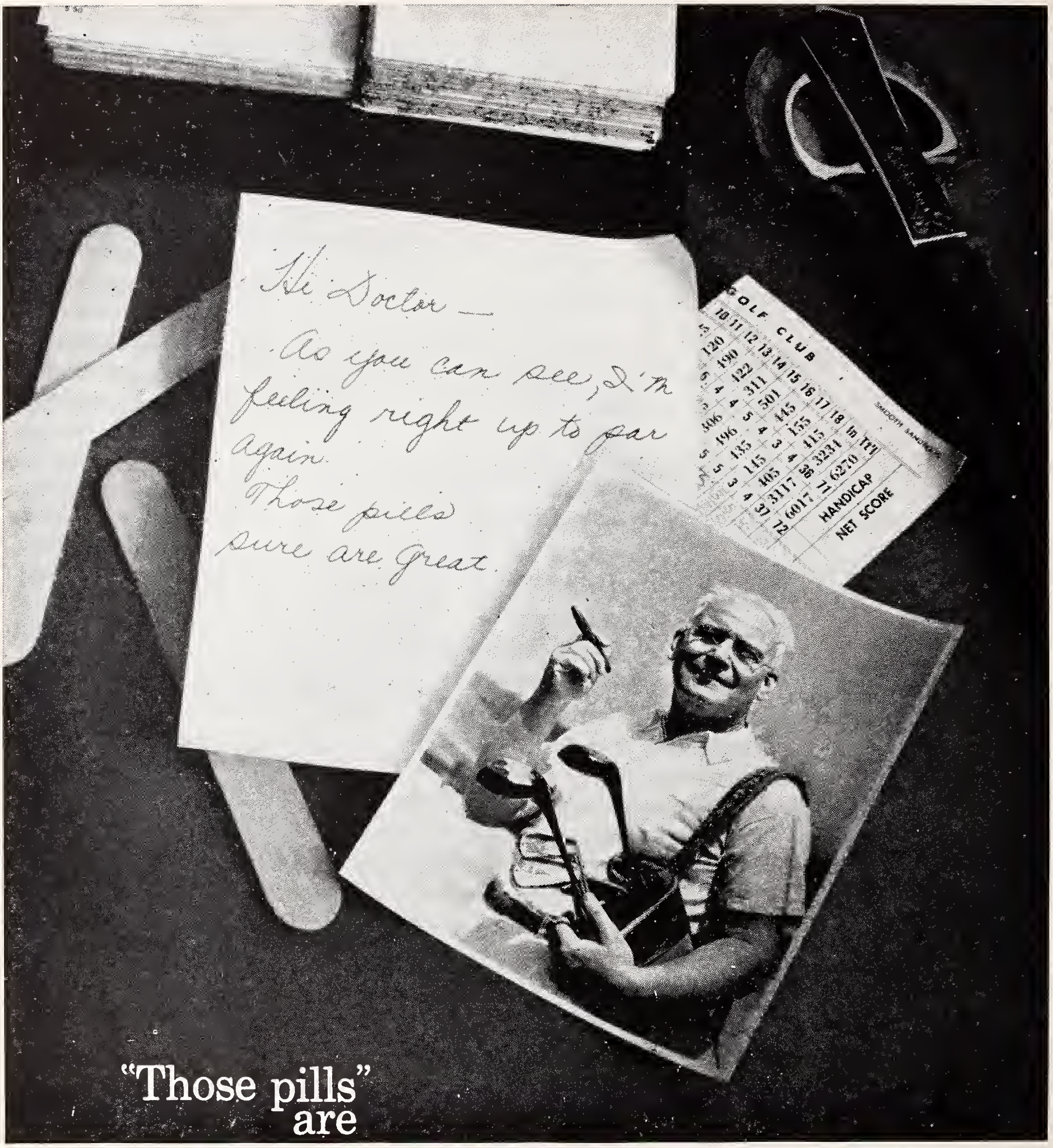

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AN EXPERIMENTAL APPROACH TO

THE TREATMENT OF THE ACUTELY ILL PSYCHIATRIC PATIENT IN THE GENERAL HOSPITAL*

THOMAS DETRE, M.D.
JEAN SAYRES, Ph.D.
NEA M. NORTON, M.S.
HARRIETTE C. LEWIS, M.S.
New Haven

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Dr. Sayres. *Clinical Psychologist, Psychiatric Division, Grace-New Haven Community Hospital, New Haven.*

Miss Norton. *Chief Social Worker, Department of Psychiatry, Yale School of Medicine, New Haven.*

Mrs. Lewis. *Social Worker, Psychiatric Division, Grace-New Haven Community Hospital, New Haven.*

In recent years many of the country's leading general hospitals have opened their doors to psychiatric patients. The trend toward providing in-patient psychiatric care in the general hospital setting has coincided with changing attitudes toward mental health itself. Although new misconceptions about mental illness have at times been perpetrated to replace old ones, the overall effect of the popularization of psychiatry has probably been to increase public understanding and to reduce fear of psychiatric illness.

SEVERAL developments preceded the introduction of the psychiatric ward into the general hospital. Mental hospitals began unlocking doors for all but seriously disturbed patients. General hospitals opened community psychiatric outpatient clinics. Some opened psychosomatic inpatient units for those who required comprehensive medical, surgical, and psychiatric care. Within the past few years a number of general hospitals have added sections for the care of a wide range of psychiatric disorders. Recent advances in physiological treatment methods, which have facilitated the management of acutely disturbed patients, have undoubtedly given added impetus to the movement.

The need for an acute psychiatric inpatient service in the New Haven area had long been recognized by the Grace-New Haven Community Hospital administration, the Department of Psychiatry of the Yale Medical School, community practitioners, and the State Mental Health Commissioner. Until recently the Department of Psychiatry operated two inpatient services: the Veterans Administration Hospital psychiatric unit, and the Yale Psychiatric Institute (a long-term residential treatment center). In January, 1960, the Grace-New Haven Hospital opened a small ward for the treatment of acute psychiatric disturbances.

Since the ward was intended as an acute treatment unit, it was decided to limit admissions to patients suffering either an acute onset of illness or a severe exacerbation of a pre-existing illness. Patients were also to be accepted for diagnostic studies. In general, the goal of treatment was to enable patients to resume the level of functioning which had existed prior to the acute episode. They were then to be discharged. Follow-up care, when indicated, was to be arranged with referring practitioners, other private physicians, or outpatient clinics.

---

* *Psychiatric Division, Grace-New Haven Community Hospital, New Haven.*

We considered it essential for the successful operation of the unit to have a full time, permanent staff and to have a high staff-patient ratio. The staff finally recommended included the following personnel: a senior psychiatrist; at least two residents in advanced psychiatric training; an occupational and/or recreational therapist; three psychiatric social workers; a clinical psychologist; a psychiatric nursing instructor; twenty nursing personnel including several graduates; a division secretary; and a receptionist. All except the residents, who were expected to rotate each year, were to be full time and permanent.

Although we felt that some autonomy was necessary for the efficient functioning of the psychiatric section, we considered it essential that the service be an integral part of the total hospital organization. Thanks to the enthusiastic participation of the hospital administration in this aspect as in our whole program, we were able to work out some elaborate arrangements. We discussed our special needs with other departments of the hospital and were able to work out plans with them which allowed us partial independence without preventing the overall integration of the service with other medical facilities. A nursing supervisor was to be responsible for the psychiatric unit exclusively. The entire nursing personnel were to be permanently located on the service; they were not to be shifted elsewhere in the hospital. On the other hand, the nursing staff was to remain under the supervision of the hospital director of nursing. The Dietary Department agreed to assign permanent staff to the floor; to keep the kitchen open to the patients twenty-four hours a day; and to make kitchen facilities available for whatever activities the recreational therapist deemed necessary.

Apart from these minor modifications, the ward was to adhere to prevailing hospital administrative policies. Charges for the daily care of patients, for example, were to be almost identical with those for other sections. This decision proved to be an important factor in marshalling the support of insurance companies, almost all of whom agreed to provide coverage for hospitalization on the new service.

Several hundred visitors attended our open house just prior to opening. They expressed particular interest in the kind of patient we planned to admit. The general feeling seemed to be that the ward was intended for persons with mild disturbances who "needed rest." There was considerable astonishment when it was made clear that we intended to take care of an acute psychotic population. Some psychiatrists thought that such patients could be observed on the ward for a few days, but would then have to be sent to another institution. We explained that we did not intend to send patients to other institutions for long-term treatment. Although we hoped that the average stay, even of psychotic patients, would be about three weeks, we were prepared to keep patients for several months if necessary.

Staff Meetings

From the first day on, daily morning conferences were held and were attended by all personnel, including nurses, aides, and secretaries. The secretary and some of the nurses took turns remaining on the floor during meetings. This policy, contrary to that of many hospitals in which only professional hierarchy attend staff meetings, was instituted to enable all the staff to understand why given decisions were being made and to make it possible for all members to implement treatment plans in a consistent manner. The chief of the hospital volunteer service joined us occasionally, as did various other members of the hospital staff and the Department of Psychiatry. These meetings, or "rounds," were used to interview and discuss new patients; to report new information about other patients; to develop treatment plans; to work out ward policies and for other ward business.

Nursing Program

An intensive training program for nurses was begun to familiarize them with modern trends in biological treatment and to discuss problems arising in dealing with patients. The nurses and aides met with the medical director twice a week. One meeting was devoted to questions and problems the nurses wished to bring up about specific patients on the ward. The other was used for more structured training purposes. Some aspects of clinical psychiatry were presented, the philosophy guiding the functioning of the ward was introduced, and various nursing procedures were discussed and clarified. Specific instruction was given on the nature and effects of the various drugs used on the ward.

Patient-Staff Meetings

Soon after opening, we began weekly patient-staff meetings similar to those developed in a number of mental hospitals. The patients initially used the meetings primarily for administrative problems (e.g. election of officers to the patient coordinating committee). Although we recognized that endless discussion of administrative detail represented in part a resistance to dealing with other issues, we came to feel that it could be useful to patients to explore and handle realistic ward problems. In line with our overall policy of promoting integrated social action from the time of admission, we began to encourage patients to deal realistically with ward situations. For example, when they reported harsh treatment by a kitchen maid, we invited her to the following meeting to hear her point of view and try to work out the problem. This orientation did not preclude the more customary use of meetings to enable patients to discuss anxiety-provoking situations. When a serious medical emergency occurred on the ward, a meeting was called to give patients an opportunity to express and deal with their feelings of panic.

Occupational Therapy

The occupational therapy program, too, was geared to the objective of enabling patients to resume effective social functioning as soon as possible. It was designed to provide structure for the acute phase of illness. As soon as they were able, patients were encouraged to return to work or school.

In addition to setting up a regular arts and crafts program our occupational therapist extended her role in several directions. She spent the first few weeks getting to know the patients and formulating ideas about the kinds of service she could offer. She began to help the patients organize various activities. With her assistance the patient coordinating committee invited a Yale singing group to the ward; held several social dances including one to which patients from the Yale Psychiatric Institute were invited; started a bi-weekly newspaper and organized movie excursions. She made a special effort to work closely with patients who had difficulty participating in group activities.

The patients requested that those who felt well enough to go outside be allowed to go shopping and to the movies together without ward personnel. We instituted a "buddy system" enabling a patient who was authorized to leave the ward to go out in the company of another patient. Although in most cases the patients made realistic selections, the choice of companion had to be approved by the staff.

The staff often received requests for room changes. Sometimes patients wanted to move into a single room, or into a multi-bed room to be with a friend. The coordinating committee took over responsibility for some room assignments. Upon receiving a request, the committee talked it over with the patients involved and then made a recommendation to the staff. The patients were remarkably accurate in assessing requests, and their activity in this area was frequently of more benefit to some particular patient than a staff decision might have been. For example, if the committee decided a request for a single room would lead to undesirable isolation, they attempted to work this out with the patient concerned.

Patient Group Therapy

We had planned before the ward opened to conduct group therapy twice a week with the patients. This was started as a large group meeting with all twenty-four patients present and was conducted by the senior resident. It soon became evident that the group was too large for everyone to participate actively. We decided to divide the group and to have each resident conduct group therapy with his own patients. We hoped that this would promote group cohesiveness that might otherwise be difficult to achieve with a rapidly changing population. We also felt that patients' rivalry for their own doctor's attention, perhaps otherwise overlooked on a fast-moving service, could be brought into the open and dealt with in this way. The division of the groups immediately produced lively, meaningful participation and the experiment became a routine part of the total treatment program.

Family Conferences

We regarded the hospitalization as a common enterprise in which the whole family participated. We planned the patient's treatment, therefore, in the context of the total family interaction. In many instances we felt that the patient's progress depended to a large degree on the ability of some family members to deal with their own problems and to work out difficulties with the patient. The social worker's role was to offer treatment to families rather than to gather information about the patient's history. Initially she was asked to interview relatives at the time of the patient's admission in order to evaluate the family situation and to assess the usefulness to families of immediate contact. However, residents often needed specific information about the evolution of the patient's illness which the patient was too ill to give. As it was mandatory to get information as quickly as possible in order to formulate treatment plans, residents began to see patients and families in initial interviews and to present their evaluation and recommendations at morning conference. If the staff felt that family members required special attention, the social worker then engaged them in more or less intensive contacts according to their individual needs.

The next phase began when the residents interpreted the confusion among family members as evidence of the social worker's incompetence. They decided to try to smooth matters out by themselves. In a heroic effort which lasted about a week, they managed to see all the families several times. They discussed these meetings at rounds with vigor and absorption, and it was clear that they had gained new dimensions in their understanding of patient-family relationships. Communications between doctor and patient, doctor and family, and patient and family, however, became increasingly distorted.

The ensuing confusion led the senior psychiatrist and chief social worker to decide at this point to implement their idea of organizing a patient-family-staff meeting. They had considered initiating meetings of this type as a possible way of dealing with a problem accentuated by the patient's presence in the community general hospital: lack of privacy. Families inevitably ran into people whose discovery that their patient was on a psychiatric floor embarrassed them. To enable them to feel more comfortable and less ashamed about the situation, we felt that it was most helpful to bring the issue out in the open. The prospective family conference was discussed at rounds and in patient-staff meetings, and the families were informed. Twenty-four patients, their families, and the staff assembled in the ward living room at the first evening meeting. After a few introductory remarks from the senior psychiatrist, and an embarrassing silence, a family member asked us the purpose of the meeting. An admittedly vague answer was given, and the audience expressed a belief that our vagueness was merely a reflection of the time-honored tradition that psychiatrists never give a direct answer. The rest of the meeting consisted of silences and questions. Matters such as the treatability of psychiatric patients, the culpability of families, the role of heredity and the possibility of relapse were brought up by the relatives. The questions were couched in very general terms. No one expressed his personal feeling about anything and everyone resisted attempts on the part of the staff to elicit meaningful discussion of pertinent issues.

Although we were not at all satisfied with this meeting, it became apparent during the week that it had stimulated much discussion between patients and their families and between different families. At the next meeting everyone again appeared. Some families brought friends who were involved in some way in their patient's welfare. At this meeting families began to phrase questions differently. More specific issues were brought up, usually in the guise of "let's suppose somebody has such a problem." When the staff attempted to relate these issues to problems of some patient and family in the room, however, there continued to be tremendous resistance to discussion. During this meeting and the following one the same difficulty inherent in the large group was apparent. The number of people involved made it impossible for everyone to participate. This encouraged the more passive and anxious persons to retire to the back of the room where they could watch and listen but refrain from contributing. Nevertheless, a few of the patients and families became involved in heated discussions of mutual problems which apparently they had never been able to talk about together before.

We again divided the large group into smaller groups in which each resident met with his own patients and their families. The smaller family conferences, too, were more successful. Each group met in a separate room and had few enough members to make a more intimate, circular seating arrangement possible. Again we wondered whether the constantly changing population would prevent cohesive group feeling and whether the presence of extremely disturbed patients might be disruptive. However, the patients already felt united because of their experience in patient group therapy. Families, although strange to each other, were at least familiar with the doctor. Families who had attended several sessions usually took the initiative in helping to orient and draw out new families. In addition, relatives showed a surprising degree of tolerance of severely disturbed behavior in the newer patients and extended support to them and their families. Families whose patients had improved were able to assure distraught relatives of newly admitted patients that acute disturbances do subside. It seemed probable, too, that improved patients and their families were reassured about their own progress by the contrast between themselves and the more disturbed patients. The family conferences became one of the most valued assets of the total ward program. After three month's trial, the meetings were increased to two a week.

Individual Family Contacts

As explained before, the resident interviewed a patient and his "key" relatives at the beginning of hospitalization. He then held as many meetings with a family as he felt necessary to gain a working hypothesis about the family structure and dynamics. If it was thought that relatives needed continued interviews, the social worker saw them regularly. The resident, meanwhile, met with the patient. When both sides appeared comfortable enough, and both patient and family seemed capable of communicating to their respective therapists in a not-too-disturbed manner, a meeting of patient, relatives, resident and social worker was held. If this proved successful, individual therapy was discontinued and all pertinent issues worked out in these four-way meetings. We found that joint family interviews were not only a useful diagnostic tool, but were also in many instances the most effective means of treating patients whose pathology directly affected and was affected by family situations. For example, marital difficulties of each partner often played into those of the other in a mutually destructive way. We often treated a patient and his or her spouse as a unit, encouraged them to talk openly about their grievances in our presence and attempted to support the healthier aspects of their relationship. We found that patients and families were often able to deal with extremely charged material when their respective therapists were present to intervene if the situation seemed to be getting out of hand.

Drugs, ECT, And Individual Psychotherapy

Initially, we considered the use of drugs at admission necessary for our peace of mind. We gave new patients massive doses of drugs to relieve not only their own anxiety but also our own. We shared the hospital's concern about the new service which admitted people with disturbed behavior; kept its doors open; disregarded traditional security measures; and was staffed by inexperienced personnel. The first eight months passed without any major crises between the ward and the rest of the hospital. We have had several severely disturbed patients, one of whom became dangerously assaultive for a period of two hours, but so far we have been able to manage crises with the staff on hand.

Later we began to find a meaningful place for the use of drugs as a part of our overall treatment program. We still used them for controlling grossly inappropriate behavior, but began using different combinations and courses of drugs for such purposes as lessening patients' anxiety, lightening depression and even deliberately increasing appetite. Appropriate drug treatment made it possible for patients to integrate more quickly and effectively into the total ward program. A guiding principle was that patients need not be unnecessarily uncomfortable. Barbiturates and other sedatives were not given to ensure sleep at night. Patients could stay up as long as they wished if they were able to meet appointments and other obligations in the hospital during the day. The living room and kitchen were kept open and the refrigerator was stocked with food. Most important, night personnel were available if a patient wanted to talk.

Electroconvulsive treatments were used to control inappropriate social behavior in a few cases where drugs were contra-indicated. A few patients were given a series of shock treatments when they did not appear to be responding to the rest of the ward program and when both past history and the present illness indicated the advisibility of such intervention. The sight of a prone figure being wheeled on a stretcher through the corridor aroused considerable curiosity and anxiety in most of the other patients. Our reasons for giving shock treatment to a particular patient, the nature of the procedure and the expected periods of confusion and memory loss were discussed in the various patient and family group meetings. Patients and families responded by extending warm support both to the patient receiving shock and to his anxious family. Other patients helped the confused patients to eat, guided them to various meetings or away from the open ward door. Patients were reassured about shock therapy when the first two patients, experienced by everyone as extremely disturbed and inaccessible before shock, began to improve noticeably day by day.

The place of individual psychotherapy in the overall treatment plan for any given patient was worked out in the daily staff meetings. Pertinent observations from nurses, aides, occupational therapist, psychologist, social worker and the other residents were all brought to bear in planning for each patient. It became obvious that some patients could make effective use of individual therapy while others tended to use it to isolate themselves from the ward community. In the latter situation, a patient's individual treatment was sometimes limited to a focus on his need for isolation. Whatever the combination of individual psychotherapy, drugs and/or shock treatment, our goal was to help the patient deal with the events leading to hospitalization, his experiences in the ward communty and his plans for leaving the hospital.

Discharge And Follow-up Procedures

Decisions about discharge were made at staff meetings. A patient's ward behavior, his visits outside the hospital and his ways of dealing with his family were continually evaluated. As soon as possible, trial visits outside the hospital with relatives were encouraged, and if these went well, were increased in number and duration. Attempts were made to interview both patient and family upon their return. If a patient had held a job prior to hospitalization, he returned to work during the day and to the ward at dinner time. Similarly, our adolescents went to school during the day and then returned to the ward. We contacted appropriate people at the job or school to enlist their cooperation and to offer our support. Contact was usually maintained until we were reasonably sure that the patient had made a satisfactory adjustment. The trial, of course, varied from patient to patient. Although a patient could simulate a greater degree of either health or sickness according to his needs, his overall social performance gave a reasonably accurate indication of his ability to function.

As each patient came closer to discharge, posthospital plans were worked out with him and his family. If continued medication was advised, he was given follow-up appointments on the ward for several weeks and then referred to his family physician. Patients who had been under psychiatric care were referred back to their psychiatrists. Those who had not been in treatment but needed further therapy were helped to find a psychiatrist near their home or were transferred to the hospital Psychiatric Outpatient Department. Several experiences with separation anxiety in patients and families led us to schedule discharges immediately following one of the family conferences. The discussions about termination in the meetings seemed to be supportive to patients about to be discharged and provided a focus on external reality for the other members of the group.

Our original plan had been to discharge patients who required continued treatment back to referring practitioners or to outpatient clinics. In many cases, however, the patient and families changed these plans. The first people about to be discharged began to express desires to use the ward as a base. Although they had difficulty leaving, they felt they could do so since they knew where to return if they became ill again. We wanted them to "graduate," to go elsewhere, to commit themselves to the status of outpatient. The danger of regression and rehospitalization in this attachment to the service alarmed us. However, we soon realized we had been interpreting their behavior on the basis of theory rather than evidence. Patients who revisited the service made few attempts to engage staff members in "therapy." They usually looked well, were attractively dressed and seemed to enjoy chatting with their friends and the nurses.

We revised our earlier ideas about discharge policy and the residents began to see a few patients for follow-up visits on the ward. At first these were informal meetings lasting only a few minutes, primarily to check medication.

In about two months, however, the floor was crowded with ex-patients going in and out. We were quite surprised to see that the patients often brought their families. The relatives, too, chatted with the nurses, greeted friends from among the patients or other visiting relatives and then left with their respective ex-patients. We were even more surprised when discharged patients and families continued to drop in on family conferences. At times we even had relatives who kept coming regularly, without the patient, well after the patient had been discharged. It was clear that our family conferences were meaningful and that some patients and some families continued to derive benefit from them after the immediate crisis of hospitalization was over.

The participation of "discharged" families was of special help to other patients and families who were anxious about impending discharge. Our residents rotated off the service at the end of June and new group leaders took over family conferences. Discharged families continued to return. We were finally convinced that it was the group activity itself to which they were attached. We instituted a routine procedure of asking patients and families to return to these conferences for at least two weeks following discharge, regardless of any other type of outpatient care they might be receiving. Families and patients who wished to continue beyond this short follow-up period were placed in out-patient family conference groups which we started for more extended follow-up treatment.

Research

During the early stages of the ward's operation, our clinical psychologist was asked to explore the most practical methods of collecting data on certain aspects of the ward program. She was instrumental in devising a coded chart for use by the nurses in recording observations of patients' and families' behavior. She helped our occupational therapist with data collection methods. Psychological testing on the ward was needed for research as well as for diagnostic evaluations. Because of the rapidly changing population and accelerated tempo of treatment, she explored the use of brief test batteries.

An overall data collection procedure was devised to learn what kinds of patients could benefit most from short-term hospitalization and what community needs could be met by an acute psychiatric service. For the same reason procedures for evaluating the efficacy and toxic effects of standard and experimental drugs were set up with the close cooperation of the departments of neurology, hematology and pathology. Questions about the patient's previous illnesses, present illness, family relationships, course of hospitalization and drug treatment were arranged into charts. Most of the questions were structured in the form of coded entries so that data could be transferred to punched cards for machine processing. The charts were designed to provide data for prospective research projects, to collect information for hospital records and to aid residents and medical students in learning to gather significant data.

Some Comments And Afterthoughts

Although the Yale Department of Psychiatry is described as psychoanalytically oriented, it has always encompassed a variety of approaches. During their work at the Yale Psychiatric Institute, the chief psychiatric social worker and the senior psychiatrist were able to evaluate the usefulness of treatment methods which combined a variety of techniques including use of drugs, intensive therapy and social work with families. They found that when separate relationships were established between doctor and patients and social worker and family, patients tended to become isolated from families and staff members tended to over-identify with their respective patients and clients. In long-term treatment, difficulties arising from parallel treatment could be worked out. In short-term hospitalizations, however, they felt that this kind of isolation of staff function and of patients from families might be deleterious. Because of their conviction about the importance of family interaction in aggravating or alleviating emotional problems, they hoped to reduce isolating tendencies to a minimum on the new ward and thereby facilitate readjustment of patients and families.

The training orientation of the Department of Psychiatry and the hospital has also influenced the ward program. The permanent ward staff is committed to teaching residents, medical students, social work students and nursing students. The challenges inherent in teaching and the constant influx of new ideas have added vitality to the ward. The training situation, however, has also created difficulties. New personnel tend to be overwhelmed by the fast tempo of the ward, by the multitude of activities, by methods of treatment different from those with which they may have been familiar and in particular by the lack of clearly defined roles. The added flexibility which we achieved by abandoning conventional roles has also increased confusion.

At the time of writing the ward was only eight months old. The overall rate of discharge and the very low readmission rate so far are encouraging indications of the initial success of the experiment. More experience and research are needed to determine what this type of service can accomplish, what kinds of patients it can most effectively treat and in what ways it can be most useful to the community.

A.M.A. CLINICAL MEETING

November 27-30 at Denver, Colorado

The 15th annual clinical meeting of the American Medical Association will be held November 27-30 at Denver, with a program geared to basic problems of medicine faced by physicians in their practice.

An outstanding scientific program, with emphasis on new research developments, has been planned under the direction of Samuel P. Newman, M.D., Denver, Chairman of the A.M.A.'s Council on Scientific Assembly.

ACUTE PSYCHIATRIC PROBLEMS AND GENERAL HOSPITALS:

REPORT OF A PRELIMINARY SURVEY*

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At the request of the Connecticut District Branch of the American Psychiatric Association and the Connecticut Association for Mental Health, the authors undertook a preliminary, brief survey of facilities for the care of acute psychiatric problems in general hospitals throughout the State. It is often said that the frontline care of emotionally disturbed persons in the community must lie with the local physician in practice. There are not and presumably never will be enough psychiatrists to take care of all such patients. It is the local physician then who will be the first to see the psychiatric emergency, and it is to his local hospital that he will turn for support and assistance in its management.

In this survey, ten of Connecticut's 32 general hospitals were selected pretty much at random but with some consideration for geographical distribution. These included both large and small hospitals from urban and rural areas. Letters were sent to the administrators of each of these hospitals explaining our interest in their experiences with such psychiatric emergencies as suicides, alcoholism, and acute psychotic disturbances, as well as post partum, post-surgical, and other psychiatric complications of patients already in their hospitals. Ten of our senior fellows in psychiatry volunteered to participate in visits to these hospitals. Each administrator, having expressed an interest in the project, was requested to arrange for their meeting with members of his hospital staff. Assurances were given that we were interested in obtaining a general picture of the situation in Connecticut and that no individual person or hospital would be identified in the report.

Financial assistance for this survey was received from the Connecticut Association for Mental Health.

The following questions were raised by the psychiatrists in their visits to the hospitals:

1. Does your hospital accept attempted suicides as patients? If such patients require emergency medical or surgical treatment, we assume that this will be provided by your staff, but is your policy then (a) to move the patient to a psychiatric hospital as soon as it is medically appropriate to do so, or (b) to hold the patient until he has completely recovered from self-inflicted injuries or damages? Do you routinely attempt to get psychiatric consultation for patients who are admitted to your hospital after they have attempted suicide? Do you routinely notify the police?

2. Does your hospital accept patients with severe acute alcoholic intoxication (a) if they are a management problem, (b) if they present no particular management problem? Do you have any general policy on the care of alcoholism, with or without medical complications? Do you have any affiliation with Alcoholics Anonymous? Have you had any working arrangement with the Commission on Alcoholism, such as in connection with referral to the COA clinics, or Blue Hills Hospital?

3. How do you manage acute excitement or confusional states, acute schizophrenic reactions, or other acute psychotic states? Has your policy been influenced by the availability of tranquillizing drugs? Where do you refer such patients? What has your experience been with such referrals? Satisfactory? Any suggestions for improvement? Would you be interested in having beds put aside for treating acutely psychotic patients? Would you be interested in such beds if psychiatric consultations were available? What are some of the considerations involved?

4. Do you see "psychosomatic" problems in which you might like to make greater use of psychiatric consultation and referral for out-patient treatment? We are thinking of such problems as asthma, hypertension, peptic ulcer, obesity, etc.

In general, the medical staffs of the hospitals in the survey showed a wide range of reaction to the problems of psychiatric patients. In two of the hospitals, the medical staffs expressed an interest in assuming responsibility for the psychiatric care of patients. In the others, there was little or no interest in participating in such care, or little inclination to become directly involved in the medical management of such patients, but rather a desire to allow them to remain the exclusive concern of the psychiatrist. With the exception of one hospital, wherever a psychiatrist was actively engaged in the care of psychiatric problems, the rest of the staff followed and favored a "hands-off" policy.

It was found that hospitals had few general policies about the care of patients with any of the problems we were interested in and that even when there were established policies (such as no admission of attempted suicides) these were readily disregarded for the benefit of particular patients. Who is the patient was more important than what is the problem. If the hospital policy precluded the admission of *patients who had attempted suicide,* a particular patient might still be admitted, but under a different diagnosis. In such cases, psychiatric consultation was usually sought if it could be obtained. Police were not routinely informed. In any case, this was generally unnecessary since most such patients were brought in by the police, who usually seemed to have a good working relationship with the hospitals. In the majority of instances, the patients were then referred to psychiatric installations after the acute medical or surgical emergency had been handled.

The general attitude of the hospitals toward the care of the *alcoholic patient* was one of disinterest or rejection. Only one hospital was willing to accept them routinely even if they were management problems. Most took the position that alcoholics were potentially disturbing to other patients and should therefore not be admitted. There was awareness of how to reduce to a minimum the management risks in the care of alcoholics with the proper use of tranquillizing drugs and other medication, but not the willingness to admit such patients (except for VIP alcoholics). With the one exception, all expressed discouragement and pessimism. Many were critical of the restricted admissions policy of the Blue Hills Hospital of the State Commission on Alcoholism, complaining about the "banking hours" it maintains. Only two of the hospitals had worked out any relationship with the Commission on Alcoholism; in some, the medical staff had never heard of it. Four of the hospitals had working contacts with Alcoholics Anonymous; the others were actively uninterested in such cooperation.

In connection with *acute excitement or confusional states, acute schizophrenic reactions,* or other *acute psychotic states* we found four hospitals willing to admit them, especially now when they can be well controlled by drugs. The six reluctant hospitals thought that the new tranquillizing drugs were of little help in the management of such patients. The other four expressed more interest and described better working relations with neighboring State or private mental hospitals. All used private or State facilities depending on the financial status of the patient. One interested group suggested more frequent contracts between local practitioners and State hospital psychiatrists.

Three of the hospitals have beds set aside or are actively planning to develop an in-patient program for the care of the psychiatric patient. One of these describes the use of a mixed open ward for convalescent, surgical and psychiatric patients. Difficulties are acknowledged, yet the experiment is considered an overall success. Two additional hospitals expressed interest if psychiatrists were available to take responsibility for their supervision. The remaining five showed varying degrees of disinterest.

The term "psychosomatic problem" seemed to be a most ambiguous one. Some doctors said they never saw any. Others regarded them as purely medical or surgical problems. Many were amused by the term, a few defensive. They admitted to seeing large numbers of such cases but did not know how to handle them and tended to treat them primarily with tranquillizers. Psychiatric consultation was rarely (two Hospitals) sometimes (two), or never (the rest) called upon for patients with psychosomatic problems (such as asthma, peptic ulcer, ulcerative colitis, hypertension, etc.).

The following conclusions may be drawn from this relatively cursory review of policies and practices of general hospitals in dealing with acute psychiatric problems:

1. While most physicians interviewed appeared to have little knowledge about the field and a good deal of apprehension in relation to such patients, the more important difficulty seemed to be the attitude that psychiatric problems are of no relevance to medical practice. There also seems to be lacking the kind of detailed, concrete knowledge which most doctors have about the management of conditions like diabetes or a surgical abdomen. Since the medical staffs of two hospitals showed attitudes of interest and concern in contrast to the others, the difficulty does not seem to lie in the nature of

medical practice as such but in the conditions under which it is practiced in different localities.

2. Psychiatrists tend to take over complete care and responsibility for such patients, excluding the referring physician, who it must be said is often only to glad to be excluded. The isolation of such patients in separate hospitals frequently at some distance from the community further contributes to the problem. If the physician in practice is to have a stake in the treatment of the mentally ill, then the psychiatrist must find a way to collaborate with his medical colleagues in shared responsibility for psychiatric patients in the community.

3. There are no particular patterns for the care of psychiatric patients in general hospitals. Patients may be treated in separate wards, or in general medical or surgical wards; they may be and are treated by physicians without psychiatric consultation, or with, although on the whole physicians will not treat patients who threaten them in any way (such as potential suicides or aggressive management problems) unless a psychiatrist is on hand for advice and consultation, and often not even then.

4. The effectiveness of the psychiatrist as a consultant depends not so much on his knowledge of psychiatry, although this must be taken for granted, as upon his attitudes of helpfulness and friendliness in his relations with other physicians, and the ability to work realistically in consultation with others.

Based upon the above conclusions, the following recommendations might be tentatively offered:

1. There would seem to be value in setting up a system for providing regular psychiatric consultation to interested general hospitals in localities where there are at present no psychiatrists in practice. Such consulting psychiatrists could see selected patients, participate in medical ward rounds, or set up rounds of their own, depending on the interests of the particular hospital. Continuity and consistency of contacts between the psychiatrists and the hospital staffs would seem essential for effective cooperative care. Interested nursing and social service personnel might also be included. A project of this kind might be sponsored by the State Department of Mental Health, the Connecticut Association for Mental Health, the Connecticut District Branch of the American Psychiatric Association, or all three jointly in collaboration with local hospitals.

2. Some method of providing psychiatric consultation for acute psychiatric problems might be considered. Such a service could be provided by the emergency service of general hospitals if they have or could arrange to obtain on-call psychiatric consultation. The admitting services of the three State mental hospitals could also serve such a function and to some extent they probably do so now, although only in relation to their own admissions. What we have in mind is the possibility of the State hospitals serving as consulting centers for the general hospitals in their area, evaluating problems, and referring patients back to the general hospitals for care where this seems reasonable and proper.

3. There is a state-wide need for further facilities to care for the alcoholic. Beds are needed particularly at the community level. More immediately feasible would be the extension of the admission hours of the Blue Hills Hospital so that patients might come in at any time of the day or night, every day of the week.

Drug Industry Contributions

All American industry has contributed, but I must give a special vote of thanks to the pharmaceutical industry, which has contributed in excess of $1 million in cash and drugs to our effort. I have no idea how many other foundations like our own are able to carry on their work because of this great industry, but because this industry has a heart, this award belongs as much to them as it does to me.—William B. Walsh, M.D., founder of Project HOPE, on receiving 4th Annual Health U.S.A. Award.

CARDIAC SURGERY
IN A COMMUNITY HOSPITAL

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The establishment of the cardiac clinic at St. Michael's Hospital in Newark, New Jersey in 1937 was the first major step in the development of an effective program of cardiac surgery at this community hospital. At that time cardiac surgery lay dormant after the scattered and somewhat unhappy experiences of a handful of pioneers. The approach to heart disease concerned itself primarily with the classification of the entities, the prescription of drugs, and the regulation of activity. The work of the clinic in the field of disease upon which surgery later became the treatment of choice was necessarily limited. However, it was evident that digitalis could not overcome pathology which posed a mechanical problem, and that absence of physical strain could not avert the inexorable course of the disease processes.

The population of the clinic increased steadily and when the first reports of successful surgical correction of congenital and acquired heart disease were published, it was deemed necessary to reevaluate the purpose and objectives of the program. The files of the clinic included many patients afflicted with potentially remediable cardiac lesions. The task of helping these patients through the tests necessary for the surgical evaluation and through the operative procedure itself seemed beyond the resources of a community hospital. On the other hand, very few of the patients could meet the expense of seeking help in the more advanced cardiac centers outside of the state.

The areas of greatest difficulty were concerned with finances and personnel. The administration and the general staff, eager to pursue the unselfish principle of helping the sick, agreed to finance the program by supplying space, by purchasing the necessary equipment, by underwriting the expenses of trained laboratory technicians and by giving free hospital care to the patients who could not afford to pay.

A cardio-pulmonary laboratory was soon set up and a team of well trained cardiologists, pediatricians and radiologists began the diagnostic studies. If these were paramount for the proper surgical evaluation of the individual patient, there still remained the problem of the surgical personnel. Two members of the surgical staff, one a thoracic surgeon and the other a general surgeon, were keenly desirous to offer their skill to the project. Their experience in cardiac surgery, however, was limited and a formal training in the new discipline was out of the question. A satisfactory arrangement was nevertheless worked out by inviting Dr. Charles P. Bailey of Philadelphia who had pioneered the mitral commissurotomy operation two years before. Dr. Bailey agreed to spend one day each week at the hospital in a teaching capacity. Moreover, he offered the use of his experimental laboratory at Hahnemann Medical College for additional training of the surgeons, who attended the laboratory once a week for a period of two years. Dr. Claude S. Beck of Cleveland, another noted pioneer in the field of

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From the Departments of Cardiovascular Surgery and Cardiology of St. Michael's Hospital, Newark, N. J.

Presented at the 169th Annual Meeting of the Connecticut State Medical Society, April 27, 1961.

cardiovascular surgery, accepted the invitation to work toward the development of the cardiac project.

With the addition of two more men, a team of cardiac surgeons was developed. An affiliation was arranged with Sea View Hospital in Staten Island whereby their thoracic resident would spend the final six months of a three year period, training in cardiac surgery and taking care of the pre and post operative work. The surgical team works as a unit and the cases are rotated so as to give an equal opportunity to all and to stimulate interest.

With the problems of space, finance, and personnel satisfactorily overcome, the question of handling the individual patient was solved after long discussion with the persons involved in the project. It was eventually agreed that all major decisions in regard to a patient would be arrived at as a result of a conference among all those involved: cardiologists, pediatricians, surgeons, physiologists, radiologist and finally the referring physician.

The first case of cardiac surgery was performed at St. Michael's in February 1950, less than two years after Bailey's first successful mitral commissurotomy. Each year since there has been an average of about sixty cases with a total of over seven hundred cases. These include about three hundred and twenty-five mitral commissurotomies, more than one hundred patent ductus arteriosus without a death, about sixteen Beck II aortico-coronary sinus anastomoses, about forty Beck I coronary revascularization procedures, forty-four Brock type pulmonary valvulotomies for both pure pulmonic stenosis and the partial correction of Tetrology of Fallot, three Blabock operations for Tetrology of Fallot. There have been thirty coarctations of the aorta corrected and there have been five exploratory cardiotomies for varying conditions.

Since the institution of open cardiac surgery about a year ago, nine cases of pure pulmonic stenosis have been corrected using Swan's hypothermia technique without a death, and seven interatrial septal defects have been corrected by means of cardiopulmonary bypass using a Kay-Cross oxygenator and DeBakey roller pump.

When the surgical program was well underway, the State Health authorities became interested in the project. Through Dr. Daniel W. Bergsma, New Jersey Health Commissioner and Dr. Marion R. Stanford, Chief of the heart section of the New Jersey Department of Health, financial help was made available for additional equipment and for a teaching program. The latter was outlined in such a way as to make available the newer knowledge of cardiology and cardiovascular surgery to the largest possible audience of physicians in the state. A course of practical cardiology, open to all interested physicians, took the students in succession from the clinical examining room to the fluoroscopic and cardiac catheterization unit, to the operating room and finally to the conference room where they could join in lively discussions about the disposition of presented cases and the findings of the surgeons in the cases that had already been performed.

The course was completed by lectures given by noted cardiologists and members of the staff, by ward rounds, and instruction in roentgen interpretation, electrocardiography and demonstration of pathological specimens for small groups. The participating physicians were thus given an opportunity to play an active role in the work of the clinic and to witness step by step the functioning of a modern unit of cardiac surgery.

As you all know Dr. Claude S. Beck established a course in Cardiac Resuscitation at Western Reserve University in 1952. This was the first course of its kind in the world. In June 1953 with the cooperation of Dr. Beck a similar course was started at St. Michael's Hospital.

The scope of the project has been gradually expanded in connection with continuous strides in diagnostic cardiology and cardiac surgery. For a proper evaluation of a difficult case the surgeon now needs the right and left heart studies in conjunction with finer cineangiocardiographic techniques requiring highly trained personnel and expensive equipment. Likewise, the advent of open techniques in cardiac surgery has brought about new problems, the solution of which entails, among other things, the outlay of considerable sums of money. It can be safely assumed that the equipment needed for a good cardiac diagnostic laboratory costs in excess of one hundred thousand dollars. The surgical department of a cardiac surgery unit must have available an experimental surgical laboratory. The expenses to equip the surgical department for open procedures with hypothermia and with an artificial oxygenator are also in the neighborhood of one hundred thousand dollars.

The transition from the closed to the open techniques is beset by perplexing difficulties ranging from need of highly trained full time personnel to vast blood bank facilities, provided the obstacle of expense is overcome. The ever changing technical setting in quest of safer and speedier procedures requires the fulltime operation of a well equipped laboratory where new methods can be tested on animals and new equipment can be tried. It is not unusual to pay a large sum for the latest electronic device only to find that by the time it has been mastered, something better has been developed. This can become an expensive proposition if one considers that each experiment costs four to five hundred dollars.

Procurement of large quantities of fresh blood needed for the operation of a pump oxygenator is always a difficult undertaking and can at times become an insoluble problem, especially if there are several surgical centers in one area. This is apparent from the untiring efforts of centers all over the country in an endeavor to use bank blood rather than fresh blood.

In spite of all the difficulties associated with a program of open cardiac surgery, it was felt that our hospital which had been the standard-bearer of this specialized surgery in the community, had an obligation to carry on and embark upon such a project. Besides this sentimental appeal, it was felt that open cardiac surgery was not a "flash-in-the-pan" with illdefined goals and questionable outcome, but was here to stay as the final answer for the correction of complicated congenital anomalies and acquired heart disease.

When early in 1956 the group from Minneapolis reported the use of an oxygenator that could be built with material at hand in the average hospital, our experimental work was started. A Sigmamotor pump was purchased, a bubble-oxygenator was built and a qualified surgeon was hired to work full-time in the experimental laboratory. Frequent trips were made to more advanced centers by various members of the team to familiarize themselves with the latest methods in this rapidly evolving field. At this point it might be worthy of mentioning that the problem of financing this modest start was overcome by utilizing some of the money collected by the group from the patients operated upon. From the beginning of the project it was decided to pool the surgical fees in a fund that could eventually be used to buy equipment and cover other expenses.

The work in the laboratory, after a slow start, began to take definite shape. The homemade bubble oxygenator and the Sigmamotor pump were replaced by a disc oxygenator and roller type pump. The need of monitoring various phases of the physiology during cardiopulmonary bypass, such as ph, partial pressure of O_2, and CO_2, blood flow, and of interpreting changes in electrocardiogram and electroencephalogram required the services of a physician with training in cardiopulmonary physiology. The increase in scope of the animal surgery which had long passed the stage of acute experimentation demanded the organization of a division of animal surgery. This included a kennel with personnel to take care of the animals, two registered nurses, an aide and a fulltime laboratory technician.

The extensive use of electronic equipment in the monitoring apparatus made us realize that much time and money could be saved if the services of an electronic engineer could be obtained once or twice a week. Accordingly, the Newark College of Engineering was contacted and it was agreed that an engineer from their Department of Electronics would be sent to the hospital two afternoons each week. This arrangement has worked satisfactorily for almost two years, and has been of considerable help in servicing several of the monitoring machines as well as in the building of new units for use in the experimental laboratory and in the cardiac catheterization unit.

In addition to the pump-oxygenator other new equipment was purchased such as a multichannel apparatus with strain gauge pressure transducers for recording and monitoring the electrocardiogram, electroencephalogram, systemic arterial and venous pressures or the pressure in any of the heart chambers. A radiometer ph meter for instantaneous venous or arterial ph was obtained as well as a flow meter, an apparatus for recording venous and arterial partial pressures of O_2 and CO_2, a Brown-Harrison heat exchanger with a complete thermorite appartus for hypothermic work, needle type thermocouples for recording the temperatures of any of the body tissues, an internal defibrillator, pacemakers for overcoming surgically induced heart block, and we have recently acquired a closed-chest defibrillator and are training physicians in the use of closed-chest cardiac resuscitation as advocated by the group at Johns Hopkins. To all this material there must be added an entire set of surgical instruments to meet any occasion.

In the clinical diagnostic department newer and more extensive studies are constantly being carried out to meet the demands of the surgeon. The success of a comprehensive surgical program ultimately depends on the strength of the diagnostic service. It has become increasingly important that diagnosis be made with ever greater accuracy. A good diagnostic center must be prepared to utilize every means available toward making a precise evaluation of the cardiac lesion. In this center two parallel endeavors conjoin in a combined conference. Prior to presentation the patient, in addition to history, physical examination, routine urine and blood studies, has an electrocardiogram, vector cardiogram, ballistocardiogram when indicated, and phonocardiogram. The latter study, incorporating the latest filtering techniques, makes a considerable contribution to the diagnosis and hemodynamic status. In many instances it presents clues that are acted upon by the catheterization unit and intensively sought after during the catheterization. If I may, I should like to quote from William Dock who said, "One should no more think of sending a patient for valve surgery without a phonocardiogram than one would, in the old days, think of sending a patient to Trudeau without a chest X-ray." In the final analysis all clinical impression submits itself to the confirmation of cardiac catheterization. By this technique we no longer mean simply registration of pressure and blood oxygen analysis. Today studies, to be called complete and accurate, utilize dye dilution curves, hydrogen studies, cineangiocardiography, intracardiac phonocardiography, intracardiac electrocardiography, etc.

Until several years ago left sided studies could only be inferred from right sided studies. No longer does the left side hold any mystery of access.

The percutaneous approach to the left ventricle, the Ross needle approach, the bronchoscopic and the posterior approach to the left atrium all have helped in the assessment of aortic and mitral lesions. A qualified person with considerable experience heads up this unit. He is responsible for the setting up of the equipment and its operation. Under this man several assistants are required. A nurse and a technician round out the actual working staff.

In close association with this unit is a special laboratory specifically set up to perform all blood gas studies. The technicians assigned to this cardiac surgical unit are either full time or on a demand basis; i.e., the cardiac surgical service has a priority on the services of these technicians. Selective cineangiocardiography affords very accurate information concerning hemodynamic and anatomic relations in congenital and acquired heart disease. The utilization of this technique is becoming more widely accepted. As of the moment the equipment is costly, is in a state of everchanging improvement by manufacturers and requires considerable technical ability. Despite these disadvantages this method gives information obtainable by no other methods.

At this point it would seem appropriate to consider the cost in relationship to the practicability of the medical and surgical procedures involved in a modern project of cardiac surgery. The expenses quoted for setting up an experimental surgical laboratory and of a good and efficient diagnostic unit refer only to equipment. The outlay does not include costly physical space or the expense of personnel to conduct the laboratory procedures.

From the two or three beds originally set aside for cardiac surgical patients, the hospital has now provided a complete cardiac pavilion, named for one of the originators of the program. With the exception of two full time physicians recently employed by the administration, all the medical and surgical procedures have been carried out by staff physicians who depend for their livelihood on private medical practice. The program has been financed largely by the hospital, the physicians themselves, the State Department of Health, grants from the New Jersey and Essex County Heart Associations, and recently by funds from private foundations.

This has been the experience and growth of our cardiac surgical unit over the past eleven years. The original premise on which the program was founded still holds—that a community has the responsibility to make facilities available to its members. It is postulated by one firm of professional hospital consultants that in the interest of efficiency and economy a qualified cardiac surgical center should service an area with a population of 1,500,000 people. In fairness to the patient and hospital alike and in order to avoid useless and expensive duplication of time and effort, it would seem advisable to pool all of the professional talent and financial resources of any given community of this size. It would seem logical for the allocation of funds by the philanthropic foundations to follow a similar pattern to see that their aid is utilized in the soundest and most valid way to provide complete care for the cardiac patient.

DIAGNOSIS AND TREATMENT OF ARTERIAL DISEASE OF THE EXTREMITIES

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A routine examination for evaluation of the peripheral arterial system is presented. A discussion of some of the newer methods of surgical therapy is also presented. Some case histories are presented with comments to help illustrate these points.

The recent dramatic advances in the surgical therapy of peripheral vascular disease are not revolutionary but evolutionary. The basic techniques of vascular anastomosis used today were successfully employed by Alexis Carrel[1] at the beginning of this century. In 1923, after Rene Leriche described the syndrome of lower abdominal aortic block which bears his name,[2] he suggested that ideal treatment would be the excision of the lesion and a graft replacement. This was finally performed in 1951.[3]

With the development of truly effective forms of therapy for diseases that formerly could be treated only palliatively or by amputation, interest in the diagnosis of peripheral vascular disease has been greatly stimulated. This paper will concern itself with the diagnosis of peripheral vascular disease by the practitioner as well as the application of the newer forms of surgical therapy available today.

Only by following a routine plan of investigation can mistakes and omissions in diagnosis be avoided. The following is a simple but useful method of evaluating the arterial supply of the extremities.

I. *Lower Extremities*

1) *History*: Interpretation of the meaning of the various findings which will be described below requires that the history be carefully considered. It is surprising how easy it can be to accurately localize the site of an arterial block from clinical signs and history alone. Thus the absence of femoral pulses, or weak femoral pulses with a systolic murmur, indicates a block in the lower aorta and/or iliac vessels. This diagnosis is accompanied by a clinical history of calf, thigh and sometimes buttock claudication. With high grade obstruction of the lower aorta, sexual impotency in the male may also be present. An interesting variation is a localized block of the hypogastric artery in the presence of a strong femoral pulse. Here a history of hip claudication alone may be elicited. Similarly, a palpable femoral pulse with no pulses distal to this level indicates a block of the superficial femoral artery, the main arterial supply of the lower leg. Classical calf claudication relieved by rest is the usual history in this case. Pain at rest in the leg or foot occurs in far-advanced arterial insufficiency. The patient will give a history that elevation of the limb aggravates, and depression improves, this pain. Both aorto-iliac and femoral blocks may be candidates for direct arterial surgery. However, a palpable popliteal pulse with no pulse felt below this level indicates in almost every case closure of the smaller vessels in the calf and foot for which a direct surgical attack usually cannot be employed. Lumbar sympathectomy finds one of its best indications in this group.

2) *Visual Observation*: With the patient lying flat in a good diffuse light observe the color of the limbs. The room should be at a comfortable temperature (72 to 76 degrees F.). In the presence of arterial disease, the normal pink color may instead be cyanotic blue, white or dusky red. Observe also the presence of dampness of the feet as an indication of sympathetic nervous activity. The presence of hair on the dorsum of the toes and feet and the gross temperature of the feet should also be observed. The most important finding in any of the above observations is a difference between the two feet or legs. Distinctly less hair or a lower temperature of one foot strongly suggests diminished arterial inflow in that limb.

With the patient still flat, the examiner elevates the legs to a steep 60 to 80 degree angle for 2 minutes and observes the color, and equally important, the rapidity of loss of color of the feet. The leg with adequate arterial supply maintains at least a faint pink color and never becomes the cadaveric yellow-white seen in severe arterial insufficiency.

The patient sits up and the legs are allowed to become dependent. While observing the second hand of a watch, the appearance of a flush is awaited in the toes. This occurs within 2 to 10 seconds in the normal leg but may be delayed as long as 2 minutes in a pre-gangrenous limb. Various delays between these times give a gross idea of the degree of arterial insufficiency. Similarly the venous filling time can help in estimating the presence and degree of arterial insufficiency. This is performed by elevating the legs as for the flushing time, then making the legs dependent and with the examiner's thumb and forefinger forming a loose venous tourniquet above the ankle observing the first appearance of filling of the veins on the dorsum of the feet. The normal time varies from 5 to 15 seconds. In the presence of high sympathetic tonus, or in obese or edematous individuals, the time may be abnormally prolonged even when arterial supply is adequate. Otherwise, a definitely prolonged venous filling time suggests a diminished arterial inflow. Naturally, both venous filling time and flushing time can be observed at the same time after a single elevation and depression of the legs once the examiner becomes accustomed to the method. Finally, with continued dependency for 2 to 3 minutes the color of the feet is observed. A dusky red, purple or blue color is definitely abnormal.

3) *Palpation*: Note that all the visual tests we have described above tell us only about the gross adequacy (or lack of it) of the arterial supply. They do not tell us whether the main vessels are open or blocked and this is important in considering the question of direct surgery. It is common during the examination of the legs to attempt to palpate only the dorsalis pedis pulses. Nothing could be more misleading. A number of unnecessarily worried patients have been seen with bilaterally absent dorsalis pedis pulses noted during a routine examination by their physicians. All their other lower extremity pulses and the visual tests described above indicated a normal arterial supply. In about 11 per cent of patients the dorsalis pedis pulses cannot be felt because of anatomical variations in the course of the vessels. A dorsalis pedis pulse which is absent in only one foot has a definite connotation of disease in the non-palpable side. The posterior tibial pulses, usually found ⅓ the distance along a line drawn from the medial malleolus to the calcaneous, are almost always palpable barring arterial closure or marked swelling of the area. The popliteal pulses, while more difficult to palpate than the others in the legs, can with practice be satisfactorily felt. The patient must be on his abdomen with the knee flexed at an 80 to 90 degree angle and completely supported by the examiner's hand to relax the muscles enclosing the popliteal space. Rather firm palpation at the center of the popliteal space is then performed. The femoral arteries are usually easy to palpate just below the inguinal ligaments though in a heavily muscled individual they may prove deceptively weak due to overlying soft tissue coverage. Particularly when the femoral pulses are weak or absent the palpation of the external iliac vessels just above the inguinal ligaments and the aorta just to the left of the midline will often yield additional information about the level of the block.

4) *Auscultation*: This should be routinely performed over the femoral and iliac arteries and over the aorta. A definite systolic murmur strongly suggests a partial block at, or proximal to, the level at which it is heard. Excessive pressure by the bell of the stethoscope over an artery can partially occlude the vessel and cause a misleading murmur. This is easily demonstrated over even a normal femoral artery.

II. *Arms*

Absence of pulses in the arm, particularly when accompanied by weakness, ease of fatiguability and claudication in the arm muscles suggest intrinsic arterial obstruction. This is usually found at the level of the subclavian takeoff or in the innominate artery. A harsh infra or supraclavicular systolic murmur transmitted toward the axilla is a confirmatory sign. Note, however, that cardiac murmurs may be transmitted to the axilla and neck also. *Intermittent* loss of arm pulses suggest the scalenus anticus, cervical rib or thoracic outlet syndromes due to *external* compression of the subclavian or axillary arteries rather than arteriosclerotic vascular changes. Murmurs may also be present in these cases. Both the arm pulses and the murmur can, however, be modified by position changes such as turning the head sharply toward the affected side with chin elevated and breathing in deeply (Adson maneuver) or throwing back and elevating the shoulders (costoclavicular maneuver). The intermittency of these findings in cases of external compression and the fact that they are commonly accompanied by rest pain and signs of nerve deficit in the arms make fairly simple the differential diagnosis between internal and external obstruction of the arteries to the upper extremities. Both are usually amenable to surgery.

III. *Neck*

Routine palpation as well as auscultation over the carotid vessels at the base of the neck and high up at the angle of the jaw may suggest a diagnosis of occlusion of the carotid or more proximal arteries. The presence of a strong carotid pulsation in the neck by no means rules out obstruction of the internal carotid artery extracranially since this vessel is difficult to accurately evaluate by external palpation. The extent of the carotid arterial lesion and its operability can be shown only by arteriography as mentioned later in this paper.

A murmur over the carotid artery coupled with a history of recurrent episodes of transient "strokes" (motor and/or sensory) suggest a partial occlusion of the internal carotid artery. Complete occlusion of this artery is usually associated with some degree of permanent paralysis. Direct arterial surgery is often highly successful in partial occlusion, but much less so in complete occlusion because of the progressive distal thrombosis. A markedly tortuous carotid artery may cause an audible murmur. Diminished cerebral blood flow has occasionally been caused by such tortuosity.

When the vessels at the base of the neck and aortic arch are involved by occlusive disease, a combination of cerebral and arm signs and symptoms occur as described under II and III above.

By far the majority of cases of peripheral vascular disease can be accurately diagnosed by the practitioner employing only the basic techniques of physical diagnosis that have been described. The sine qua non is that one know what is normal and only by routinely examining the extremities of *every* patient can this knowledge be acquired.

Furthermore, an accurate record of peripheral pulses made during the routine physical examination in every patient enables one to evaluate the importance of the absence of a particular pulse at a later time. A pulse, once present, gives a definite connotation of progressive disease when it disappears.

Only one instrument can be recommended as offering any useful additional information in the office diagnosis of peripheral vascular disease. This is the oscillometer. It helps confirm one's impressions of the presence or absence of pulsations at various limb levels and is usually more sensitive than the fingers. It is important to apply the cuff smoothly and with equal tightness to various areas. In the case of an unusually large limb, an ace bandage wrapped rather firmly over the cuff will help achieve this. To avoid damping the arterial pulsations, the cuff should be applied over an area of minimal muscle mass during routine evaluation. The lower end of the thigh and the ankle area just above the malleoli are such areas in the lower limb. The cuff is inflated just above systolic pressure and, by reducing it 10 millimeters at a time, the pressure at which maximal oscillations occur is determined and recorded. With this technique, variations between the two limbs and measurements taken at different times become more comparable and meaningful.

The extent of the oscillations do not, unfortunately, correlate completely with the condition of the underlying vessels. A normal femoral artery may show oscillations of 5 at the lower thigh while a partially occluded but firm walled artery may give a reading of 10 to 15. Thus, as pointed out in the first portion of this paper under "Visual Observation", a difference between the two limbs is the most important finding. Oscillometric findings alone mean little—correlation with physical signs and history are necessary for an accurate diagnosis.

While not generally employed in office diagnosis, certain other diagnostic aids are used in the peripheral vascular clinic, usually after the diagnosis of vascular disease has been established and the question of the value of various surgical procedures arises.

A modification of the oscillometer used in the Peripheral Vascular Department combines a narrow pneumatic cuff connected to a pressure sensitive piezo-electric element to reproduce an oscilloscopic picture of the pulse wave. The shape and height of the wave give information as to the condition of the vessels and the presence and level of any block. The instrument is exquisitely sensitive compared to the standard oscillometer.

A Constant Temperature Room is useful in two ways. Practically it can be employed to indicate the amount of sympathetic nervous system tonus that is present in a limb and thus help predict the value of sympathectomy. As a research instrument it is valuable since the result of many forms of therapy cannot be evaluated accurately unless the effects of varying room temperatures are eliminated.

An accurate thermometer for both skin and intramuscular use is also employed as a clinical and research tool. The "Tele-thermometer", based on the semiconductor (thermistor) principle, is simple, records almost instantaneously and is very rugged.

Mention of the use and misuse of arteriography and aortography will conclude this section on the diagnosis of arterial disease of the extremities.

Arteriography of the femoral vessels is a relatively innocuous procedure and is absolutely necessary in determining operability of blocks of the femoral and popliteal vessels. The use of 20 to 50 cc. of 50 per cent Hypaque (R) injected via a Cournand or 18 gague thin wall needle into the artery in the femoral triangle gives excellent diagnostic films. An easily built hand cassette changer can be made to obtain two sequential films on one 14″ by 36″ film following a single injection of contrast medium.

Visualization of the carotid arteries via direct injection in the neck and the vertebral arteries via direct or indirect injection of the subclavian arteries is necessary to establish the presence and extent of an extracranial arterial block which may be susceptible to direct surgical attack. While a single x-ray can give excellent diagnostic films of the carotid and intracerebral arteries, sequential views of the same injection with a rapid cassette changer is often more informative. Antegrade catheter venous aortography with the cassette changer has given satisfactory visualization of the take-off of the branches of the aortic arch with minimal danger.

Beyond the physical signs of a pulsating mass, a P-A and lateral x-ray of the abdomen is the most valuable aid in diagnosis of abdominal aneurysm. Calcification in the wall usually allows identification. It should be noted that in a thin individual the normal aorta can be both seen and felt and is tender on pressure. Therefore, as in the more peripheral vessels, constant examination of the normal patient is necessary in order to recognize the abnormal. Aortography is rarely indicated in the diagnosis of abdominal aneurysm and may in fact be misleading inasmuch as the thrombus partially filling the aneurysm will often result in the visualizing of a narrow or normal appearing aortic lumen.

Direct lumbar aortography carries definite risks. Many cases of occlusive disease of the lower aorta and iliac vessels can be treated without aortography though its use is justified when clinical findings do not give sufficient information. Aortography is mandatory in establishing renal artery obstruction as the cause of hypertension. Even here, various indirect (catheter) techniques may be preferable to direct aortic puncture. In aortic and iliac blocks, an antegrade venous aortogram with the catheter tip in the superior vena cava or left atrium gives a fairly good diagnostic picture when employed with a rapid cassette changer. This is the same technique described above for the branches of the aortic arch in the chest with the addition of a film of the femoral vessels taken with a portable x-ray machine simultaneous with the last few exposures of the lower aorta and iliac vessels. In obese individuals venous aortography is usually unsatisfactory.

The following series of cases illustrates salient points in the diagnosis and treatment of peripheral vascular disease.

Case #1: The patient was a 74 year old white male who was admitted with a 10 day history of loss of appetite, a sense of fullness in the epigastrium and nausea. He had noted a pulsating mass in the upper portion of his abdomen for the same period of time. There was no pain. Flat plate of the abdomen showed calcification in the wall of an aneurysm. Resection of a grapefruit sized aneurysm arising just below the left renal artery was performed with insertion of a teflon straight tube graft. Two hours postoperatively the left foot was noted to be cold and white with no oscillations noted on the C-W Oscillometer below the popliteal area. The popliteal, dorsalis pedis and posterior tibial arteries on the left were not palpable. The popliteal artery was explored thru a posterior incision. A soft recent clot was removed. There was complete and immediate restoration of pulses and the patient made an otherwise uneventful recovery. Two years later he was in good health with no recurrence of signs or symptoms of aneurysm or arterial insufficiency.

Comment: Diagnosis in this case was made by physical findings and flat plate of the abdomen. The aneurysm ended just above the aortic bifurcation. It arose at the point where the left renal vein runs anterior to the aorta. The upper limit of abdominal aneurysm is almost always found at this level. Preoperative evaluation of this patient's pulses had shown the presence of good dorsalis pedis and posterior tibial pulses on both sides. When these were no longer present postoperatively on the left with accompanying confirmatory signs of a white cold foot compared to the right side, exploration was carried out. The oscillometric and palpatory findings indicated that the block would be at the level of the popliteal artery. It might be noted that this was one of the earlier cases treated and heparin was administered in rather small doses through catheters into each common iliac artery. Since this time the use of general heparinization (35 to 50 milligrams) injected directly into the aorta prior to clamping has been employed without any repetition of clotting in the distal arterial tree.

Case #2: This 55 year old white male was admitted with a 1 month history of increasingly severe constant low back pain with episodes of exacerbation. He had 2 pillow orthopnea with mild dyspnea on exertion. Six years before he had had a myocardial infarction and a second infarction 4 months prior to the present admission. During his admission 4 months ago for his second myocardial infarction, a palpable pulsating mass had been found in the epigastrium extending below the umbilicus. It had caused only mild epigastric discomfort at that time. During his present admission it was noted that pressure on the mass reproduced and exacerbated the complaints of low back pain. At surgery an aneurysm involving the aorta from 1 centimeter below the left renal artery to the upper part of both common iliac arteries was found. This was excised and a bifurcation teflon graft was inserted. The patient had an uncomplicated postoperative course except for thrombosis of prolapsed hemorrhoids which required a hemorrhoidectomy about 10 days postoperatively. A year later the patient was admitted for bronchopneumonia which was successfully treated. His abdominal pain had been completely relieved. Two years post operatively the patient died of a third infarction.

Comment: It was initially felt that surgery should be deferred on this patient who had had his second coronary 4 months prior to the latest admission.

The signs and symptoms of dyspnea and orthopnea indicated cardiac failure as well. It was our feeling that this might be a case where the danger from his cardiac disease outweighed the danger of his abdominal aneurysm. The occurrence of very severe pain forced the operative procedure which he tolerated very well.

Case #3: The patient was a 55 year old doctor with a 2 month history of "sharp grasping pain" in the right calf on walking less than a block. This was relieved by rest. The right foot was noted to be paler than the left when lying flat. This difference was accentuated by elevation. The venous filling time was 12 seconds on the left, 18 seconds on the right. All left leg pulses were 3-4 plus. In the right leg the femoral pulse was 4 plus, the popliteal, posterior tibial and dorsalis pedis pulses could not be felt. A femoral arteriogram with 30 cc. of 50 per cent Hypaque showed an area of marked narrowing and constriction at the level of Hunter's canal. After preliminary lumbar sympathectomy, endarterectomy was performed with complete restoration of pulses and relief of claudication. The patient has been able to return to his favorite recreation, golf, with no limitations during a two year follow-up.

Comment: This patient illustrates the case with a rather short block in the femoral artery which can be treated by local endarterectomy. The femoral artery above and below the area of block showed minimal changes. "Anchoring" the distal intima with sutures after endarterectomy is a very important part of such a procedure to prevent distal dissection by restored blood flow. As a protective measure preliminary or concomittant sympathectomy is favored in elective surgery on the femoral artery or where evidence of distal smaller vessel disease is present.

Case #4: This 64 year old storekeeper was admitted with a 3-4 year history of increasingly severe fatigue in the right calf, thigh and buttock which had recently limited his walking to 50 feet. About 3 weeks before admission, blue painful discoloration of the right great toe developed with ulceration. Easy fatigability and mild claudication were present in the left leg.

Examination: There were no palpable pulses on the right side. The left iliac and femoral arteries were 2 plus. The popliteal, dorsalis pedis and posterior tibial pulses were barely palpable on the left. There was a thrill and a murmur over the left iliac and femoral artery. A left lower lobe pneumonia developed while the patient was hospitalized and surgery was delayed for several weeks. At operation the lower aorta and left common iliac artery showed a partial occlusion with calcified atheromatous plaques. The right common and external iliac arteries were completely obstructed. The aorta was transected and a Y shaped teflon prosthesis inserted end to end above, end to side below to the left external iliac artery and the right common femoral artery. A modified bilateral lumbar sympathectomy was performed. An arteriogram on the table revealed that the superficial femoral artery on the right was patent. The fact that only one weak pulse could be felt in the right foot postoperatively, however, confirmed the clinical impression that smaller distal vessel closure was present. This patient was working full time within a month and had unlimited walking endurance a year later. The blueness of the toe and the small ulceration healed within a period of a week postoperatively.

Comment: This case illustrates the point that multiple levels of block or the presence of diffuse disease in the smaller vessels is necessary before gangrene or pre-gangrenous changes occur. Even though complete restoration of pulses was not possible in view of small vessel changes, the restoration of major blood flow from aorta to iliac and femoral arteries reversed the gangrenous process and freed this patient of his symptoms of severe claudication. Note that a murmur could be heard over the stenosed, but not occluded left iliac and femoral arteries while none was heard over the right side because of complete occlusion.

Case #5: A 60 year old housewife was admitted with a 10 year history of gallbladder disease with recent severe exacerbation of pain. She also had a long history of congestive heart failure secondary to mitral stenosis with dyspnea, orthopnea and auricular fibrillation. Surgery had been deferred because of her severe cardiac disease. However, because of unremitting right upper quadrant pain which could be controlled with neither diet nor analgesics, cholecystectomy was performed. On the fourth postoperative day the patient complained of sudden severe pain in her right leg followed by numbness. Anesthesia to pin prick was present to a level about 2 inches above the knee. Temperature change was noted to approximately the same level. There were no pulses below the femoral on the right. It was noted by careful examination that the femoral artery could be palpated just below the inguinal ligament with abrupt cessation below this level. On the opposite leg the femoral could be traced well down on the thigh. Venous filling time was 80 seconds on the right and 8 seconds on the left. The flushing time was 5 seconds on the left and 40 seconds on the right. The color of the two feet showed a marked difference on elevation, the right being much the paler of the two. Immediate intravenous heparin was administered followed by surgery under local anesthesia within 2 hours of the occurrence. A 3 centimeter embolus was found blocking the common femoral. This was removed thru a transverse arteriotomy incision. Small extentions were present due to propagation of the clot into the superficial and deep femoral arteries and these were removed as part of the embolus. There was excellent flow from all 3 vessels following removal of the clot.

Comment: The diagnosis was easily established on the basis of physical findings alone with a confirmatory history. It could be predicted in advance from clinical findings that the level of the clot was such that local anesthesia would be sufficient. Under sedation and local anesthesia the entire procedure was performed in 3/4 of an hour. When the diagnosis of peripheral embolus is made the immediate administration of intravenous heparin is indicated to prevent the propagation of secondary clot while preparations are being made to take the patient to surgery. Routine anticoagulation is not employed postoperatively in patients following surgery of larger vessels (aorto-iliac segment). In this patient coumadin therapy was started several days postoperatively to lessen the likelihood of a second embolus. Heparin is generally used after extended femoral endarterectomy, though not after femoral by-pass grafts or embolectomies. The long roughened internal surface of the vessel after endarterectomy of a vessel of small diameter like the femoral artery indicates the use of heparin.

Case #6: A 68 year old male awakened in the middle of the night with a "terrible pain" in his left leg. When seen 9 hours later he had a very pale leg with coldness and numbness to the midthigh. He gave a 10 year history of claudication in the left calf. His electrocardiogram showed changes compatible with old anterior and posterior wall infractions. Ventricular extra systoles were present. He gave a definite history of a coronary occlusion 15 years ago which had been without sequelae of angina or dyspnea. On examination there were no pulses present in the left leg. However, the left iliac pulse could be palpated about 2 inches above the inguinal ligament. The left leg and foot were cold and cadaveric blue-white in color when level. With the leg dependent, only a faint trace of color was present in 60 seconds. At the end of 90 seconds there was no venous filling. There was loss of sensation to pin prick to a level about 12 inches below the inguinal ligament. The femoral area was explored. A large quantity of soft dark clot was removed from the common femoral and iliac artery with excellent pulsatile flow from above. No back flow from the deep or superficial femoral arteries could be obtained, however. There were marked sclerotic changes in the common, deep and superficial femoral arteries at the site of exploration. The popliteal artery was explored and found to be in fairly good condition. A knitted dacron graft was inserted from the common femoral to the popliteal artery. Excellent pulses were obtained when the graft was completed. The patient was fully ambulatory on the following day. Color and sensation in the leg were normal several days postoperatively. A month postoperatively he was able to walk an unlimited distance without claudication.

Comment: While embolectomy of the femoral orbrachial vessels is usually a very simple procedure which can be performed under local anesthesia, this case points out that it can also be a complicated procedure which requires that the surgeon be prepared to insert a graft or perform an endarterectomy if necessary. The situation in this case was predicted preoperatively by the fact that the patient had had previous calf claudication suggesting old complete obstruction of the superficial femoral artery. The fact that no femoral pulse was felt and that the iliac pulse could be felt only some distance above the inguinal ligament indicated that a major block was present above the level of the common femoral artery. It is a good principle even when exploring for what is thought to be a very localized embolus to prepare the entire leg in the event that exploration of the popliteal area or even the ankle region for the "back flushing" procedure may be necessary.

It is a fallacy to presume that arterial embolism occurs only in the presence of auricular fibrillation. It may occur with various other arrhythmias as well as normal cardiac rhythm. A history suggestive of a recent mild myocardial infarction (with a mural thrombus) can often be elicited from the patient who throws an arterial embolus in the presence of normal heart rhythm.

Case #7: This 63 year old male had noted the onset of claudication in his calves seven years prior to admission. A diagnosis of partial block of the lower aorta was made at that time but no specific therapy had been recommended. There was a gradual increase in the severity of the symptoms with the occurrence of claudication not only in the calves, but in both thighs and buttocks as well. He was seen in vascular consultation because he could walk only 25 to 50 feet before the onset of claudication, numbness and weakness of both legs. On examination, the legs were thin but showed good muscle strength and tissue nutrition. There were no pulses palpable in the legs, nor could an aortic pulsation be felt in the abdomen. The oscillometer confirmed the lack of pulsations in the legs. A catheter was passed via the antecubital vein to the superior vena cava-atrial junction for performance of an antegrade (venous) aortogram. Excellent visualization of the abdominal aorta was obtained. This revealed a complete block of the abdominal aorta below the renal arteries plus a large plaque partially occluding the origin of the left renal artery. Thromboendarterectomy of the aorta was performed from the level of the left renal artery to the iliac bifurcation. A knitted by-pass graft was inserted between the lower aorta and the iliac artery on one side and the common femoral artery on the other. There was complete restoration of all pulses postoperatively with unlimited walking ability.

Comment: This case illustrates the classical Leriche syndrome with complete block of the lower abdominal aorta. The symptoms of claudication, weakness and numbness gradually ascending to higher muscle groups as the block extends and becomes more complete is typical. The history and the lack of palpable pulses make it possible for the clinician to make a firm diagnosis on purely clinical grounds. Technically, thrombotic disease of the aorta at renal artery level requires a modification of the surgical approach. The aorta was clamped above the involved left renal artery orifice while the thrombotic material was removed via a large incision in the lower aorta. The left renal artery was momentarily clamped also in order to prevent embolism into that vessel during the manipulations incident to thromboendarterectomy of the aorta. A bilateral femoral arteriogram performed on the operating table revealed complete normality of the superficial femoral arteries and the vessels at the popliteal bifurcation and below. This localization of disease is not uncommon in the Leriche syndrome and explains the usual absence of gangrene since the collateral vessels can carry blood into a normal arterial tree below the aorto-iliac block.

Case #8: This 47 year old male executive noted the onset of bilateral calf and thigh claudication 3 months prior to examination. His walking was limited to 50 yards at a slow pace. For about a year prior to this he had noted the gradual development of easy fatigability of both legs. His total blood cholesterol level was 366 mgs. per cent. He had no clinical electrocardiographic evidence of heart disease. A trial of vasodilators by his family physician gave no improvement. The femoral pulse was barely palpable bilaterally and a systolic murmur was heard over both femoral and iliac areas. No pulses could be palpated below the femoral, although the flushing time and V.F.T. were at the upper limits of normal. The abdomen was explored thru the usual xiphoid to pubis left rectus splitting incision and aortotomy performed. A Y-shaped obstructing atheromatous plaque of the lower aorta and both common iliac arteries was removed. All peripheral pulses were restored and walking distance was unlimited following surgery.

Comment: This patient's postoperative course illustrates the common picture seen in patients who have undergone major abdominal arterial procedures. Postoperative paralytic ileus is invariable for a period of 48 to 72 hours and the use of a Foley catheter gastrostomy tube is routine. An indwelling urethral catheter for 3-4 days is also routine because of bladder atony. Ambulation is usually delayed for 1-2 days though movement in bed is encouraged. Operations on the aorta require exposure for which only a full length upright incision is satisfactory. Note that the V.F.T. and flushing time were normal preoperatively. This is characteristic of even high grade blocks in the aorto-iliac segment when the vessels distal to the block are in good condition. With complete block they may be moderately prolonged.

Conclusions

Newer surgical methods have greatly improved the outlook in diseases of the aorta and peripheral arterial tree. As a result, the diagnosis of these cases becomes increasingly important. Methods of x-ray diagnosis continue to undergo rapid changes and improvements. Because there are certain risks in the various methods of aortography, they should not be used without good reason. Furthermore, it is a good general rule that the extent of the disease process found at operation far exceeds that suggested by arteriography or aortography. Therefore, the surgeon must be prepared and capable of treating whatever he finds by endarterectomy, by-pass grafting, excision and replacement therapy or any combination of these procedures.

However, it is a disservice to the patient to adopt an attitude which is completely surgically oriented. There is an important place for conservative measures in the treatment of obstructing lesions of the peripheral arteries. Mild claudication in the older sedentary person need not be treated surgically. Conversely, incapacitating claudication, particularly in the younger individual, or impending gangrene warrants more aggressive therapy. All patients with impaired arterial circulation should be advised of the dangers of excessive heat or cold and the importance of meticulous cleanliness of their limbs. Lumbar sympathectomy, alone or in conjunction with direct arterial surgery, remains a very valuable procedure.

Addendum

All cases presented are from the ward service of the Section on Peripheral Vascular Disease, Department of Surgery, Hospital of St. Raphael or private patients of the author at the Hospital of St. Raphael and Grace-New Haven Hospital.

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ASPIRATION FOR CEPHALHEMATOMA

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Cephalhematoma, which occurrs to the infant during birth, is a subperiosteal swelling filled with blood, usually involving the parietal bone. It is caused by trauma, and the swelling does not extend beyond the suture lines and fontanels. The question whether the swelling is caused by leakage of cerebrospinal fluid through a fracture line has been suggested. The possibility of fracture should be ruled out by X-ray. The standard management is "no treatment," yet this does not invariably produce ideal results. While the swelling usually disappears spontaneously, occasionally rigid conservatism in the management of cephalhematoma may result in unsightly deformity if calcification occurrs.

Clinical vigilance to recognize the cases which could develop calcification should supplement the "no treatment" policy to prevent skull deformity. Disappearance of the cephalhematoma is often dramatic and sudden, suggesting that the clot hemolyzes with drainage through a diploic vein. However, some clots persist and a hard ridge may appear on the periphery of the hematoma, like an advancing edge of myositis ossificans.

Cephalhematoma occurrs in over 1 per cent of new borns. Levine and Bacci[1] report 1.4 per cent out of 1209 deliveries; Hamilton[2] reports 1.6 per cent out of 7563 deliveries with calcification of cephalhehatoma in 4 out of the 126 cases; Kindal and Woloshin[3] report 2.49 per cent out of 2774 newborns, about 25 per cent of cases showing also fracture of the parietal bone.

The expectant management of cephalhematoma is based on the concept that a cephalhematoma may absorb with no treatment. However, a case was reported[4] of fatal meningitis in an infant who had had no treatment but in whom a blood-borne infection metastasized to the hematoma in the scalp, formed an abscess and broke through into the cranial cavity. One patient[5] with calcified hematoma for which operation was done went into severe shock during operation, but was finally revived.

In 1939 Kastendieck[6] of Budapest advised that cephalhematoma should never be aspirated. In 1947 it was suggested that cephalhematoma should be occasionally aspirated if it does not dissolve at an early date. The risks of aspiration seems less today than in earlier days; the protection afforded by antibiotics makes it safe. On the other hand, the continuing presence of the hematoma itself predisposes to infection. If calcification occurrs, one has to choose between accepting a permanent monstrous deformity or the risk of performing a major operation for removal of the deformity.

Report of Cases

1. D.D., a female infant, born after prolonged labor in a primipara, showed bilateral cephalhematoma. An expectant policy was followed and no active treatment was given. On one side the mass became hard and a shell of calcification was noted in the hematoma; a year later the calcification had gone through the entire mass. As the child grew, the absolute size of the bump remained the same, the unsightly bump seemed smaller in relation to the skull. In the female one may depend on the coiffure for cosmetic requirement.

2. In G.Y. cephalhematoma was still present in both parietal bones 22 days after birth and showed no sign of disappearing. The rim of the mass was beginning to show hardness, the center was markedly softened. Because of the danger of organization and calcification, the hematoma was aspirated. The procedure was done in the operating room with aseptic technique with an excellent result.

3. B.M. had a hematoma for 4 weeks after birth which suddenly disappeared within a period of 36

hours. It appears that the clot liquified and drained through a nearby vein.

Technique

The need for aseptic precautions requires the procedure to be done under controlled conditions as in an operating room. The skin is prepared by shaving and painting with an antiseptic; the area is draped. The sides of the hematoma are pressed to increase the distance between skin and skull and the skin is pierced. With a new sharp needle there is no resistance, the touch may be delicate and deliberate. The direction of the needle may suit the operator; a tangential direction is less likely to impinge on bone. The tangential position also permits better sealing of the needle puncture. If the proper time for aspiration has been chosen, the clot is hemolyzed and there is no difficulty in aspirating the fluid.

Comment

It is possible that cephalhematoma calcifies more frequently today than in former years. Certain environment factors and also the routine use of vitamins leads to an increased probability of abnormal calcification associated with a high vitamin D intake. The safety of aspiration is greater now than in earlier days and the protection gained by non-interference is not real.

Expectant treatment may be followed as long as the entire mass is soft, but if a rim does appear, and especially if calcific lipping is shown by X-ray, the hematoma should aspirated.

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Polio Vaccine

The decision of the Surgeon General to license the production and marketing of Type I of the Sabin oral live-virus polio vaccine may prove to be an unfortunate one. The risk is that it will cause many people to forego the full series of injections of the Salk killed-virus vaccine, even though the new oral vaccine will not protect against paralytic poliomyelitis caused by types II and III. Type II is unimportant as a cause of infection, but type III now appears to be responsible for more cases of paralytic polio than type I, and there is some evidence of a further marked increase in the percentage of type III cases. Four injections of Salk vaccine at recommended intervals reduce the incidence of paralytic polio by close to 95 per cent, and physicians have an obligation to encourage the widest possible use of this vaccine in the coming months. The new oral vaccine should never be used as a substitute for a booster dose of Salk vaccine. If the physician wants to provide maximum protection for a child or an adult, he will accomplish much more with additional booster doses of killed-virus vaccine than with Type I oral vaccine.

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CONNECTICUT MEDICINE

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Will It Be Socialized Medicine?

Whether one chooses to call government regulated medicine "socialized" or not, it is sometimes provocative to consider in its simplest terms the whole proposal to use the Social Security approach to financing medical care for the aged. In the following editorial, it seems to us that the Public Relations Committee of the California Medical Association has succeeded rather well in its attempt to reduce this very complex question to one which is basic and much easier to understand.

D. S. O'C.

The inexorable logic which proves that the approach to medical care for those over 65 through the Social Security System will lead to tax supported and therefore government regulated and controlled medical care for all—"Socialized Medicine"—must be made clear to all. When this has been done, then the core question "would government medicine be best for Americans?" can be decided once more by a congress or an electorate fully aware of the real question at issue.

The King-Anderson bill, introduced identically into both Houses of Congress, proposes to provide certain admittedly incomplete and inadequate medical care services to beneficiaries of the Social Security system and the Railroad Retirement Act who are over 65. They will be favored as a special group whether the individuals themselves need these "free" services or not. The heavily burdened working population will be compelled to pay for this program through an additional social security tax. Thus one segment of the population will find itself subsidizing another with an inadequate program of gratuitous services whether they are needed or not.

What must be the logical consequence of this? First, the program will not be repealed. This would be "unfair" to the millions who were compelled to finance the program with the understanding it would continue until they themselves would be its beneficiaries. It would therefore be politically impracticable ever to reverse the mechanism. Can the program remain static? This too seems logically impossible. The benefits are admittedly incomplete and inadequate particularly for those who truly need them. To accomplish even this worthwhile purpose the benefits will clearly have to be expanded. But under the Social Security system this will automatically result in a similar increase in benefits for more and more people who will need them less and less.

When this occurs will it be fair to the taxpayer in the working population who must meet the increasing expense? He will become understandably restless. Ought not he and his children, who must similarly support him later on, be included in the benefits as well as pay the bill? A political majority will certainly agree that this is only fair. And finally, the unfortunate minority not even then eligible for these gratuities cannot be excluded forever.

Thus inexorable logic leads to the certain conclusion that the Social Security approach to medical care for the aged must result in tax-supported and therefore government regulated and controlled medical care for virtually all. Therefore the position of the AMA and the CMA is clearly correct, that this would in fact be an irrevocable step which must lead to socialized medicine for America.

The congress and the public must come to realize the true core decision which they must make. Is government medicine really best for Americans? Once again physicians must speak out convincingly in the interests of patients.

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Acute Psychiatric Problems And General Hospitals

A scientific article appearing in this issue under the above title presents a matter to which the medical profession and the hospital administrators should give immediate attention in developing a sound basic approach to what must become an increasingly important community problem.

The State Department of Mental Health logically should take the lead in the education of physicians in the modern approach to mental diseases and in the organization of community hospital facilities for the care of mental problems not requiring State facilities.

It is hoped that this article will stimulate action to provide community facilities for mental care.

D. S. O'C.

Setting A Good Example

Surgical correction of congenital and acquired cardiac disease was impossible only a few years ago. Diligent labor in operating room and laboratory has resulted in the development of techniques and equipment which have made cardiac operations routine today in teaching centers of medicine throughout the world.

This is a highly specialized area of surgery requiring large numbers of personnel and vast expenditures for equipment. As a result, the non-university community hospital finds it difficult if not impossible to extend such a program to its patients. Yet such operations can become an activity of a smaller hospital as demonstrated by the experience described elsewhere in this issue of *Connecticut Medicine*. Determination, much hard work and much private financing have combined to bring cardiac surgery to a New Jersey community where such an undertaking might have seemed doomed to fail.

It is indeed enlightening to see physicians, hospital administrators and interested consultants working together to produce an outstanding surgical program such as this "on their own". This is an excellent demonstration of the pioneering spirit which has always been part of American medicine and emphasizes that almost anything can be done if one is willing to expend time and effort. Other hospitals could follow this example in solving some of their own problems and extending their services beyond the commonplace.

I. S. G.

What Is Life?

> *Nature makes so gradual a transition from the animate to the inanimate that the boundary between the two is doubtful and perhaps non-existent.* —Aristotle.

As we learn more and more about the detailed mechanisms by which living organisms store and use energy it is at times intriguing to speculate as to how they got started in the first place. The first serious thoughts about this in modern times we owe to Darwin and Wallace[1] who speculated that if one keeps going back into the evolutionary past, eventually you must reach a point in which some aggregates of matter looked at from a distance we would call alive and some of which we would not. Extrapolation further back would bring us to more primitive aggregates none of which we would call alive. In other words Darwin conceived of a living organism developing in an evolutionary sequence of events in time from non-living material which at some point when for some reason a sufficient number of the desired properties had come together in a single region of space we would call alive.

Almost at the same time Louis Pasteur did an experiment in which he showed that under the present conditions of existence no life can originate on the surface of the earth except as it came from pre-existing life. Although it is clear enough that Darwin's and Pasteur's ideas are not antithetical, nevertheless they were considered so by many until the turn of this century. As is true in most biological antitheses new knowledge leads to a dialectical resolution, sometimes by redefinition, sometimes by new experimental observations. Today a totally new concept has arisen out of the controversy between the vitalists and the mechanists, those that espouse spontaneous generation of life and those who maintain that life must come from pre-existing life.

It is easy enough if we attempt to describe the difference between a man and an inanimate object like a stone or between a bacterium and a large protein molecule to clearly define the properties that distinguish the living from the non-living. The living has the ability to grow and reproduce. It has the ability to change and mutate and it has the ability to metabolize food, and respond to external stimuli. If we add to this, size of the aggregate of a living thing, then organisms with the above properties would range from whales to bacteria of 200 Mu in diameter. A break would be present between the largest molecule a chemist knew which was 20 Mu and bacteria.

If viruses had not been discovered everything would have been well. Those who would like to believe that life was something distinctly set apart, unapproachable and unexplainable by science, would have felt comfortable. Then came the discovery of viruses around 1900.[2] First the plant virus of tobacco mosaic, foot and mouth disease virus of cattle, and then the virus of yellow fever affecting man. These infectious disease producing agents are of very small size, have the ability to grow and reproduce within living cells and the ability to mutate during reproduction. The fact that the virus needed a highly specialized cell in which to grow was no different in principle than that any organism required a certain environment in which to grow, even bacteria and animals.

Then came startling revelations about the size of viruses from the crystallization techniques and the electron microscope in which all sizes of viruses were discovered ranging from 20 Mu to 200 Mu. Some large viruses are actually larger than well accepted living organisms and some smaller than certain protein molecules. Therefore at last a continuity was found to exist as we go from electrons, mesons, atoms, and molecules of the physicist and chemist to the organisms of the biologist and so on to the stars and galaxies. Nowhere is it possible any more to draw a line saying below this size is non-living and above it is living. There exists a gradual transition with respect to size and complexity from things that are normally considered alive to things generally considered non-living.

We have said above that the essence of life is the ability to reproduce, a specific predetermined pattern which is retained and perpetuated in time. But in the course of this process another basic property appears, that is, the ability to mutate, to change or to respond to a stimulus. "It is this which adds grandeur to life and is responsible for the whole of the evolutionary process and the myriad kinds of life on this planet. It is responsible for man, his conscience, his faith".[2] We have known since Darwin's time about formation of new species, have seen them produced experimentally by a variety of techniques. If viruses are living organisms, they also should exhibit the property of mutation. That they do is now well established and this fact has become the basis for oral vaccines against poliomyelitis and measles.

What we have learned about viruses has come from being able to recognize, purify and isolate them in pure form. As a result there is now thought to be no fundamental distinction between animal and plant viruses. In fact the bacterial virus is a very complex structure with a head and a tail like the sperm organism of higher animals. Some like vaccina are more differentiated and approach the nature of an organism because it exhibits a cell-like structure. Some besides nucleic acid and protein appear to have lipid and carbohydrate in a limiting membrane. So we have a wide range in virus structure from small crystallizable animal, plant and human viruses which are nucleoprotein molecules through intermediate structures consisting of nucleoprotein lipid and carbohydrate to large structures possessing a morphology and composition in all respects similar to that of an accepted cellular organism. They all have the all important property to reproduce their own characteristic structure when placed within certain living cells.

How did chemical structures like nucleic acid which possessed the ability to replicate come into being? Melvin Calvin suggests[3] ways in which random organic synthesis and autocatalysis could lead to an organized structure in which all the elements are related to one another in a rather specific way. He believes that catalytic developments of proteins and the code development of the polyneucleotides arose and grew simultaneously.

Eventually there must have come the key step, the formation through chance combination of a nucleic acid molecule which had the capacity of replication. That moment marked the beginning of life. The de-oxynucleic acid molecule DNA became a code which contained all the information required to replicate itself and also control the protein structures by dictating the specificity of protein synthesis. If we agree that DNA is an encoded form of life capable of self replication and that it can bring about the translation of its own code into the remaining aspects of life then it would follow that given a reasonably healthy environment containing materials for synthesis, that DNA once created in the right place and time could indeed create life and perpetuate it.

When a chemical structure something like DNA which possessed the ability to replicate, came into being once upon a time it would have gone on forever thus, unless the great phenomenon of mutation was also present. In a sense this is a built in error provided by nature, so that replication is not perfect and it so happens that one in about a million times the replication produces something that is slightly different.[2] Such a change, recognized as a mutation is of very great importance and as these errors or differences accumulated from the first produced nucleic acid, many nucleic acid compounds came into being now recognized as genes. As an assembly of genes now called chromosomes came about, a physical structure appeared which was responsible for accumulation and preservation and exhibition of these differences. Such assemblies of genes were incorporated finally into a structure with a limiting membrane and once this great step in evolution took place, it became possible for gene interchanges between the cells. The greatest form of genetic interchange is of course the sexual process in which there is a fusion of two cells. This is a phenomenon of the greatest fundamental importance, for now the way is open to genetic combinations, a factor of the greatest speed-up of the evolutionary process. And so we find the power to replicate in nucleic acid compounds, mutation because of a built in error in the replication process and finally genetic recombinations as recognized factors upon which life as we know it is dependent.

Having said all this is it possible to reduce biology to physics and chemistry. Is it enough to rely upon the chemistry of DNA to explain all living activity? Hinshelwood[5] points out clearly that it is a dangerous oversimplification to hold the view that DNA is the basis of genes which could ever be self-replicating in isolation. "The building blocks of cells wonderful as they may be as structures are useless by themselves", that no special part need be credited with a new and mysterious virtue by which to duplicate itself, that nothing less complex than an entire cell is capable of self-replication. We are still not in possession of the missing link between the highest organized virus and the living cell. What is becoming clearer all the time as Elsasser[6] points out is that an organizing specificity cannot be due to the DNA of the germ cell alone and for that matter no single component of the germ cell can possibly serve by itself as the final arbiter of biological specificity. Nils Bohr[7] has stated this point very clearly. "Life cannot be reduced to the chemistry of some special substance and that the very existence of life must in biology be considered an elementary fact, just as in atomic physics the existence of a quantum of action has to be taken as a basic fact that cannot be derived from ordinary mechanical physics".

L. H. N.

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Injury: A Great Killer

The commonest cause of death of Americans under the age of 36 is trauma, or injury. This startling fact was the primary theme for discussion by the oldest orthopedic society in the world, the American Orthopedic Association, at its seventy-fourth annual meeting here recently.

Accidents continue to be the leading cause of death in children. Dr. Harrison L. McLaughlin, Professor of Clinical Orthopedic Surgery at the College of Physicians and Surgeons of Columbia University, told the cost of injuries in the United States in 1960 was more than $950,000,000 in medical fees and hospital expenses.

He urged that orthopedists take the lead in establishing a team approach to the problem of trauma.

Pointing out that in accidents the weakest link in the therapeutic chain is emergency room treatment, he said three times as many patients were treated in emergency rooms as were admitted to hospitals. In New York City last year two million patients were treated in emergency rooms, which have become, in effect, community medical centers.

One of the great problems is the professional staffing of these treatment rooms. In New York City this has been a particular problem, as it is often necessary for physicians not especially trained in surgery or orthopedics to act as admitting physicians in emergency rooms, because no such specialists are available.

Dr. McLaughlin said he felt many lives could be saved, and disabilities prevented, with a reorganization of emergency services. He said:

"Current trends toward sub-division of an injured person into as many water-tight compartments as he has systems are * * * apparent in undergraduate instruction, resident training and patient care. In theory these are intended to insure that each of his injuries will receive the most expert care available.

"In practice, treatment by a 'committee of specialists' too often neglects the patient. A general contractor is required to correlate and supervise the many skilled mechanics who build a house. The injured person deserves no less."

There was evidence at the meeting of the internationalmindedness of the world's leaders in orthopedic surgery. Foreign guests from Argentina, Chile, India and a number of other nations were among the 400 members and guests. The thread of internationality was woven through all the discussions.

** By Howard A. Rusk, M.D. Reprinted with permission of the author and of* The New York Times.

THE PRESIDENT'S PAGE

Late in the spring of this year, Rogers, Slade & Hill, the consulting firm engaged to carry out our opinion survey of members of Connecticut State Medical Society, submitted a report on the official questionnaire together with the findings of extended interviews with eighty-one members of the Society. The report is divided into eight sections or fields and written on eight by eleven stationery is about one inch thick. The number of copies available is limited but they were distributed among the membership of the Council with the suggestion that the contents be studied as well as read. The task of digesting the report will be time consuming so that the Committee and the Council will need to study and comment on the fields separately.

The questionnaire was sent to 3300 members during September of 1960. Of these, 1558 returns were made and of this number 1282 physicians stated they were engaged in the private practice of medicine, 272 were engaged in other types of practice. Rogers, Slade & Hill would have preferred 1800 or more replies, in as much as there are some thirty categories of physicians in the membership of the Society. It is my own feeling, however that since seventy per cent of the physicians fall into five classifications, the results of the studies together with interviews in depth of eighty-one members, makes for a reliable and valid basis for the opinions stated. It may be of interest to note that of the seventy per cent in the five classifications referred to above the general practitioner makes up twenty six per cent, the internist sixteen per cent, general surgeons thirteen per cent, obstetricians and gynecologists eight per cent and pediatricians seven per cent.

I am particularly interested that during this period when the County Medical Societies are meeting that the membership be made aware of some of the opinions expressed with respect to the effectiveness of their Society. In the interviews, approximately one in four doctors candidly stated that they are not active in the State Society and are not sufficiently informed to have any opinion as to how effectively the Society is functioning in the socio-economic field. Some of our members recommend the employment by the Society of additional public relations advice, actuaries, economists, legal advisers and (rather surprisingly) bargaining agents. One physician stated that it is his opinion that general practitioners as a group are so busy in the struggle of caring for their patients and of making a living that they cannot serve the Society either on committee or as officers since they have office hours for their patients in the afternoon and "if we have any time at all for ourselves and our families, it's in the evening." This opinion leads one to reflect on wherein his obligations are any different from those of his associates who are serving as officers or on committees of the County and State Society, and further, would he suggest that their dedication to their obligations to their patients and desires for family life are any different from his own. How many of you would agree with these opinions—"our leaders are not always the best men—sometimes they are picked to do them honor; sometimes because they are back slappers"—"many doctors who become active in medical organizations are politicians rather than students of economics"—"Personally I am far from pleased with those who now represent us, many doctors in our County feel the same way."

Let me suggest that all these alleged deficiencies in the effectiveness of our County and State Societies can be corrected only by attending and participating in the affairs of the organizations.

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James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

Mutual Admiration

Last Labor Day morning, a lengthy union-sponsored television program was beamed into the homes of those Connecticut residents who were up and about before lunchtime. It was an extremely well put together documentary which eulogized the myriad accomplishments of the American union movement, all the way from Samuel P. Gompers and the shirtwaist factory fire right down to the present moment.

In delightful pear-shaped tones, the narrator (a prominent star of stage and screen) gave his listeners to understand that Labor—with a capital "L"—has been directly or indirectly responsible for bringing about some 90% or better of all good things which have come to America in the past four or five decades. "Never faltering for a moment in its efforts to do what is proper and right and beneficial for *all* of us," the unseen commentator said, in effect, "union leadership has both initiated and achieved most of the progress this country has made in the 20th Century thus far." It was really educational—and exciting as well—to learn these things, and it brought a measure of reassurance to those of us with sometimes faint hearts to know that in the future, as in the past, these men of superior vision will be devoting their time and energies toward making us all happier, making our lives easier and seeing to it that every single one of us gets everything he is entitled to "as a matter of right."

Then, in a smashing finale which was accompanied by the stirring sound of martial music and the always inspiring sight of Old Glory waving proudly in the breeze, we listeners were exhorted to "take off our hats" to the working man on Labor Day and to pay tribute expecially to his leaders who have done so much for us for so very long. In fact, so carried away had we become when the program ended we were not at all surprised to find that our hat *was* in our hand (figuratively speaking) and that our lips were adding a silent "Amen" to the announcer's prayer that Labor would move on from here to even greater heights in its quest to make each of us a healthier and happier person, often despite ourselves.

But our enthusiasm was short-lived, alas! Could we have done so, we would have hastily withdrawn the hearty pat on the back we had just given members of the union hierarchy! For upon picking up the morning newspaper, our eyes were drawn immediately to an account of a statement filed at a hearing of the House Committee on Ways and Means by President James B. Carey of the AFL-CIO's International Electrical Workers Union. Speaking for his IEU boss, a Mr. Joe Swire said of people like us: "The AMA is no longer a professional organization of physicians. It has become a high-powered, well-heeled lobbying group . . ." . . . "The last time the AMA had an original idea . . . that merited praise was in 1914." . . . "Today, as in the past, the approach of the AMA to the problem of medical care for the aged and its inertia and apathy toward the health needs of the American people is indisputably an asset to the Communists."

As one might expect, some of our most heart-warming illusions were sadly shattered by these remarks and our little "era of good feeling" was brought to an abrupt end. The holiday had been quite spoiled for us, and we went to bed still wondering if, for all his harsh criticisms of the American Medical Association, the IEU President couldn't have somehow found it in his heart to temper his vituperation with some little token acknowledgement of the good we doctors may have done over the years. After all, mutual admiration is the best kind and you can attract more flies with molasses than with vinegar. Everybody knows that!

Well, it looks like you can't please them all. We frankly admit to having been pretty sore about the whole thing at the time. But somehow we have just never been able to hold a grudge against anyone for very long and so we say, a trifle belatedly: "Happy Labor Day to *you*, Mr. Carey, and many of them!"

W.R.R.

COUNCIL MEETING

Thursday, September 7, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman, at 2:30 P.M. on Thursday, September 7, 1961. Present in addition to the Chairman were: Drs. Feeney, Deming, Goldberg,

Hess, Caplan, Cullen, Scully, Ogden, Bradley, Cornwell, Grant, Rentsch, Murray, Jr., Purnell, Martin, Egan, Davis, Chartier. Also present: Dr. Richards, Mrs. Lindquist, Mr. Burch. Absent were: Drs. O'Connor, Gardner, Wilson, Katzin, Gorman, Gevalt, Phillips, Hastings.

It was VOTED to approve the printed minutes of the meeting of June 21, 1961.

EXEMPTION FROM DUES. It was VOTED to exempt Nathaniel Selleck, New Fairfield, from payment of dues during 1962 and 1963 for reasons of postgraduate education.

EXEMPTION FROM DUES. It was VOTED to exempt John P. Rogowski, Fairfield, from payment of dues during 1961 for reasons of postgraduate education.

COMMITTEE ON MENTAL HEALTH. It was VOTED to appoint Harold S. Wright, Greenwich, to membership on the Committee to complete the unexpired term of Franklin S. DuBois, New Canaan, deceased.

FEDERATED ACCOUNTING SERVICES, INC. The Council was advised that Federated Accounting Services, Inc. of Boston, Massachusetts, desires to advertise in Connecticut Medicine and rent the Society's addressograph facilities for the purpose of informing the membership of its accounting program. No objection to this proposal was voiced and no action was taken.

AMA WORKSHOP ON TECHNIQUES OF RELATIVE VALUE STUDY. On the recommendation of Benjamin D. Thaw, Hartford, Chairman of the Committee on Relative Value Study, it was VOTED to request Mr. Roscoe C. Edlund of the firm of Rogers, Slade and Hill to attend this Workshop and to make a report on the meeting to the Relative Value Committee and the Council. It was further VOTED to reimburse Mr. Edlund for travel and subsistence expenses up to the amount of $215, chargeable to the Committee.

COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. It was VOTED to bill the N.E. Council for the costs of materials, etc. incidental to meeting the request of the N.E. Council for envelopes to be used for publicizing the New England Postgraduate Assembly, November 6-7-8, 1961.

COMMITTEE ON PUBLIC RELATIONS. It was VOTED to adopt the following resolution, recommended by the P.R. Committee: RESOLVED: That the Council of the Connecticut State Medical Society affirm the concept of the Connecticut Medical Community and authorize the Society's Public Relations Director to meet with other medical and para-medical groups to continue development and activation of this concept with the approval of the Connecticut State Medical Society.

PANEL ON MEDICAL CARE OF THE AGED. It was VOTED to accept an invitation to participate in a community service panel program on medical care of the aged to be put on in Hamden, Connecticut, on the evening of November 27, 1961, by the Hamden Jewish War Veterans. It was further VOTED to request the New Haven County Medical Association to designate one of its members to participate as a representative of CSMS and NHCMA. It was further VOTED to request each constituent county medical association to develop a "Speakers Bureau" from among its members, such speakers to be prepared to express Medicine's point of view on methods of financing medical care. Pursuant to this last action, it was VOTED that the Committee on Public Relations, in conjunction with the General Manager and the Public Relations Director, take immediate steps to develop a suitable program to assist in the establishment of speakers bureaus, such program to include workshops, indoctrination materials and other aids.

REGIONAL CONFERENCE ON PREVENTION OF DISABILITY. It was VOTED to request the President or his designate to attend this Conference which is to be held at Providence, Rhode Island, on November 29-30, 1961. The Conference will be put on under the joint auspices of the U.S. Public Health Service, the Rhode Island State Department of Health and the Rhode Island State Medical Society.

AMA AWARD TO GENERAL PRACTITIONER OF THE YEAR. Being apprised that the House of Delegates of the American Medical Association, in June, 1961, had voted to abolish this award, the Council VOTED *not* to request the AMA Board of Trustees to give further consideration to this matter. It was further VOTED that the Connecticut State Medical Society *not* establish a similar award, the reason for both actions being that the AMA and the Society represent doctors in all categories of practice and there are physicians in every type of practice whose contributions to medicine may be found worthy of special recognition.

COMMITTEE ON BUILDING MANAGEMENT. On recommendation of the Committee, it was VOTED to authorize the payment of $189 to the Rivolta Construction Co., Inc. of New Haven for necessary repairs and replacement work on the public sidewalks adjacent to the Society's building.

Also on recommendation of the Committee, it was VOTED to authorize Benedict and Co., Inc. of New Haven to undertake to repair the boiler of the building's heating system, the extent of such repairs to be approved by the Committee but, in any case, not to exceed $1290 which represents Benedict and Company's estimate if complete replacement of the boiler is found to be necessary.

Considered under this same item of business was a recommendation from the General Manager's office that the expenditure of approximately $1300 from the Russell Fund be authorized for the purchase of new typewriters and other equipment. It was VOTED to approve authorization of this expenditure.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to remove from the table an item of old business which has to do with a request from the PH Committee that the Council approve the establishment of "regional health centers". The matter had been tabled several times previously, pending clarification of what a "regional health center" is, in the meaning of the request. The Council received a letter of explanation in this matter from Commissioner Franklin M. Foote of the Connecticut State Department of Health in which Dr. Foote pointed out that what was desired was a State Department of Health Regional Office and not, in any sense, a health clinic or medical care facility. Acting on this information, it was VOTED to approve the purpose of establishing a State Department of Health Regional Office.

DATE AND PLACE OF SEMI-ANNUAL MEETING OF HOUSE OF DELEGATES. It was VOTED to hold the semi-annual meeting of the House of Delegates on Thursday, December 7, 1961, and to accept the invitation of the Fairfield County Medical Association to hold the meeting at a site in Fairfield County to be determined by that association. By a vote of 10-7, it was further VOTED to approve the suggested rotation for the semi-annual and annual meetings of the House of Delegates as printed in the agenda, subject in each case to the approval of the governing body of the county medical association concerned. The projected rotation of meetings through 1964 follows:

Year	Annual	Semi-Annual
1961	New Haven	Fairfield
1962	Hartford	New Haven
1963	Fairfield	Hartford
1964	New Haven	Fairfield

COMMITTEE ON AGING. Two recommendations of the Committee on Aging were acted upon as follows:

a) It was VOTED to adopt a Resolution which reads:

RESOLVED: That in the interest of continuity of the care of patients being transferred from the responsibility of one agency to another, the Council of the Connecticut State Medical Society strongly recommend that a single uniform form, based on that prepared by the Connecticut Joint Commission for Improvement of the Care of the Patient, together with items from form W-10-R of the Connecticut State Welfare Department, be accepted by every patient-care agency in the State, including private practitioners, and that such form be completed and accompany each patient when transferred from one agency to another, and be it further

RESOLVED: That the Council of the Connecticut State Medical Society recognize and commend the efforts and work of the Connecticut League for Nursing in preparing the inter-agency referral form which it developed on behalf of the Connecticut Joint Commission for Improvement of the Care of the Patient.

b) As outlined in the following statement, it was VOTED to approve the objectives of producing films of the nature described, but to reserve approval of the proposal contained in Paragraph 5 at this time, and pending future consideration of full details of all financial arrangements and allied matters relating to this undertaking, when these have been completed. The statement recommends:

THAT: The Connecticut State Medical Society co-sponsor with the State Dental Society a series of six to eight films in color of seminars to be presented by selected members of the medical and dental professions;

THAT: The content of the films be under the strict control of the Connecticut State Medical Society and the Connecticut State Dental Society and that agreements be worked out as to the distribution of the films;

THAT: The Connecticut State Medical Society appoint one or more members who would be responsible for insuring that nothing unacceptable to the Society would be included;

THAT: These films are to be of an educational nature for the health professions, and in the future deletions and additions to these films may be made as the result of possible changes in techniques; and

THAT: The Connecticut State Medical Society authorize Mr. Paul deFur of the deFur Production Unit, of the United Press International Films to raise the necessary funds from an ethical pharmaceutical company prepared to sponsor the films.

CONNECTICUT MEDICAL SERVICE, INC. The Council received as information a brief report from William J. Murray, Jr., New London, a CMS Director, on recent and current activities of the CMS Board. No old or new business relating to CMS, Inc. was received or acted upon.

JOINT DINNER MEETING OF HEALTH AGENCIES. The Council was informed by Dr. Feeney that Mr. Joseph P, Cooney, President of the Connecticut Hospital Association, has invited the President, the General Manager and two other officers of the Society to meet with representatives of CHS, Connecticut Blue Cross and Connecticut Medical Service, Inc. to discuss matters of mutual interest and common objectives relating to "the ultimate welfare of the patient." It was VOTED that the President designate "two other officers of the Society" to attend this dinner meeting which is being planned for a date in early December.

RESOLUTION FROM THE MEDICAL ASSOCIATION OF GEORGIA. The following Resolution was received from the Medical Association of Georgia:

WHEREAS: Numerous efforts by certain political opponents of the American Medical Association have been made in recent months in the press and other media to discredit the American Medical Association by insinuating (or by stating outright) that the Association does not have the support of the majority of practicing physicians in this country and does not represent the will of the majority of practicing physicians in this country, therefore be it

RESOLVED: That the various county medical societies of the Medical Association of Georgia go on public record (by paid advertisement, if necessary) as stating emphatically that the American Medical Association does, indeed, represent their will and desire and that the present leadership of the American Medical Association enjoys the full confidence and support of the entire membership of the Medical Association of Georgia, and be it further

RESOLVED: That other state medical associations be encouraged to do likewise in an effort to squelch, at least, this bit of misinformation currently circulating through the mass media.

It was VOTED to approve the intent of this Resolution and to forward a copy of it to each of the eight county medical associations with the recommendation that it be considered and acted upon at their forthcoming semi-annual meetings.

ELECTION OF STUDENT MEMBER. It was VOTED to elect to student membership John C. Darrow, 35 West End Street, New Britain, Georgetown University—Class of 1963, Pre-Med: Holy Cross College, Parent: John E. Darrow.

COMMITTEE ON MEDICAL CARE OF VETERANS. The Council received two items of business from the Committee on Medical Care of Veterans. The first of these was a recommendation that the Council suggest to a VA facility within the state that several categories of staff appointments at the facility be related to membership in county, state and national medical organizations for the purpose of "allowing more careful screening of applicants". It was reported that this recommendation had the approval of VA officials. From the discussion which ensued, it appeared that the Council members felt that standards for hospital staff appointments should be set by the administration and staff of each hospital along lines which will serve its own needs best, and that no action by the Council on this suggestion was necessary. It was therefore VOTED to refer the matter back to Committee for further evaluation, accompanied by a letter which would reflect the sense of the Council's discussion just described.

A second matter was received as information. This was a report from the Committee on Medical Care of Veterans that the VA fee schedule for the current year, approved by the Committee, had somehow been delayed in transit to the Council through the Committee on Third Party Payments. It was reported that the chairmen of the two committees were in the process of conferring on this matter. No action was taken by the Council.

REQUEST FOR SPEAKER ON "SOCIALIZED MEDICINE". It was VOTED to appoint the General Manager to speak on this subject at a meeting of the Woman's Auxiliary to the New Haven Dental Association. The meeting is being arranged by Mrs. D. Mark Kolligian, Program Chairman for the NHDA, and will be held at the New Haven Medical Association Library on September 26, 1961.

JOINT MEETING WITH AMA COUNCIL ON MEDICAL EDUCATION AND HOSPITALS. In accepting an invitation to send representatives of the Society to meet with members of the AMA Council on Medical Education and Hospitals, Boston, Mass., Saturday, October 11, 1961, it was VOTED to designate James R. Cullen, Hartford, Vincent A. Gorman, Bridgeport, and Howard J. Lockward, Manchester, to attend the meeting with Ellwood C. Weise, Sr., Bridgeport, as alternate in the event that one of the representatives named is unable to attend.

CIVIL DEFENSE. Two items relating to civil defense and casualty planning were considered. The first concerned replies from two of the Society's representatives to the State Department of Health's Operational Survival Plan who had been requested by the Council to report on their activities in civil defense work. From their letters, it appeared that the scope of their participation in the state plan was not entirely clear and it was VOTED that the General Manager write to the State Department of Health for the purpose of obtaining information as to what the Society could do to enhance civil defense and disaster planning throughout Connecticut, particularly with reference to the duties and obligations of physicians in this program.

The second matter was in regard to an invitation from the U.S. Public Health Service to send a representative of the Society to a Medical Self-Help

Training Program to be held at Brooklyn, N.Y. on October 17-19, 1961. It was VOTED to request John Shoukimas, Hartford, to attend this meeting and to report to the Council thereon. It was further VOTED to reimburse Dr. Shoukimas for necessary expenses associated with his attendance.

EXEMPTION FROM DUES. It was VOTED to exempt Francis W. Westneat, New Haven, from payment of dues for the duration of physical disability.

AUTHORIZATION TO OBTAIN LEGAL COUNSEL. In association with filing with the Commissioner of Health a complaint against a physician licensed in Connecticut, the Executive Committee of the Society's Section on Dermatology requested authorization from the Council to obtain legal advice from the Society's attorneys on two specific matters, which are:

1. The liability of the president of the Section on Dermatology with regard to filing the complaint and whether he is protected against counter-suit, and

2. The question of whether the procedure involved in the complaint against the physician concerned in the action by the Section on Dermatology is a medical procedure or a cosmetic procedure.

It was VOTED to authorize the Executive Committee of the Section on Dermatology to confer with the law firm of Wiggin and Dana, New Haven, for the purpose of obtaining advice on the two specific matters listed. It is understood that this action does *not* authorize the Section to retain Wiggin and Dana as its legal representative in this matter.

ADVISORY COMMITTEE ON NUTRITION. It was VOTED to take from the table a letter to Secretary Ribicoff of HEW from the Advisory Committee on Nutrition of the Committee on Public Health. Action on the letter had been tabled at the Council meeting of June 21, 1961. It was further VOTED to consider this matter at the next meeting.

DATE OF NEXT MEETING. It was VOTED to request the Chairman to select the date for the next meeting.

1962 AMA Dues

Attention of members is called to an increase in American Medical Association dues, voted by the AMA House of Delegates at the June, 1961 meeting in New York. As of January 1, 1962, AMA dues will be $35 a year instead of $25 as at present. The reasons for the increase were outlined at length in the July 10th issue of "AMA News".

NEW MEDICARE INFORMATION

Cardiac Catheterization

1. Patients suffering from cardiovascular conditions wherein cardiac catheterization is medically indicated and determined to be re-required by the cognizant medical authority (Charge Physician) in the proper management of the illness will be considered to be "acutely ill." This is an administrative determination which establishes authorization of the procedure for payment in the future. It is not retroactive.

2. Effective 1 September 1961, the cardiac catheterization procedure, when performed on an inpatient basis, will be considered as authorized care whether or not the procedure is followed by definitive surgery.

3. Claims for performing this procedure bearing a "from" date not earlier than 1 September 1961 may be processed for payment.

1961 MEETINGS

Oct. 5-6-7—District No. 1 meeting of the American College of Obstetricians and Gynecologists at the Jimmy Fund Bldg., Childrens Medical Center, Longwood Ave., Medical School and Hospital area, Boston.

Oct. 19—Semi-Annual Meeting, New Haven County Medical Association, Waverly Inn, Cheshire.

Nov. 1—Symposium on Rheumatic Fever—Harkness Memorial Auditorium, Yale University School of Medicine, 333 Cedar Street, New Haven, 9:30 A.M.-3:30 P.M.

Nov. 6-7-8 — New England Postgraduate Assembly, Statler Hilton, Boston.

Nov. 27-30 — Clinical Meeting, American Medical Association, Denver.

Dec. 1 — New England Health Education Association—Fall meeting at 1200 Beacon St., Motel, Brookline, Mass.

Dec. 7—Semi-Annual Meeting, Connecticut State Medical Society House of Delegates. Stratfield Hotel, Bridgeport, 2:00 P.M.

1962 MEETINGS

May 3-4 — New England Health Education Association—Spring meeting—Andover Inn, Andover, Mass.

May 18-19 — Connecticut Society American Board Obstetricians and Gynecologists Travel Club meeting in Montreal.

June 25-29—Annual Meeting, AMA Medical Association, Chicago.

Nov. 26-29—Clinical Meeting, AMA, Los Angeles.

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A REPLY FROM THE SECRETARY OF HEW

Those who may have read the open letter sent to the Secretary of Health, Education and Welfare by the General Manager (Connecticut Medicine—*September, 1961*) *may also be interested in examining Mr. Ribicoff's reply, which is reprinted herewith. Probably no useful purpose would be served by continuing this correspondence or in evaluating critically the Secretary's response. Suffice it to say that the General Manager feels his basic request has not really been complied with; i.e., that this Society be furnished proof of sanctions being taken by the American Medical Association against members who are not in agreement with its attitude toward financing medical services for the aged through Social Security.*

September 5, 1961

William R. Richards, M.D.
General Manager,
The Connecticut State Medical Society,
160 St. Ronan Street,
New Haven 11, Connecticut.

Dear Dr. Richards:

Thank you for your letter of recent date. I have read it with interest, and appreciate having your point of view.

The position of organized medicine on the subject of health care for the aged under Social Security has, of course, been made quite clear.

Some weeks ago the American Medical Association mailed out a poster which all doctors were urged to display in their offices. Thereafter, large advertisements appeared in many of the nation's newspapers. These materials contain assertions which are simply not so.

The poster describes the health care proposal as "socialized medicine." The fact is that the Government will in no sense be supplying or controlling medical services. The legislation now before Congress simply provides that certain medical care costs, principally hospital and nursing home bills, will be paid out of a fund built up through Social Security contributions.

The AMA ads speak of controlling the choice of a patient's physician. The fact is that the legislation specifically guarantees the patient's right to select his own doctor and his own hospital, as well as the doctor's right to treat the patient without any semblance of Government interference. In fact, the bills of private physicians are not covered by the proposed legislation.

The AMA materials also state that they represent the views of 180 thousand doctors. This claim is refuted every day by the many letters I have been receiving from individual members of the AMA who vigorously oppose the position announced by the organization's leadership.

In regard to your specific inquiry, the ability of organized medicine to oppose those who disagree with them and some of the techniques used are well documented in a scholarly study in Volume 63 of the Yale Law Journal, May 1954. The article includes discussion of specific court cases in different parts of the country in which organized medical associations have been censured for their oppressive tactics. I am glad to add that, to my knowledge, there has been no instance of such activities on the part of The Connecticut State Medical Society.

Sincerely,
Abe Ribicoff,
Secretary.

NEW

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The Blue Shield Plan for Connecticut

Are We Fighting A Battle We Can Win?

THE REV. ROBERT VARLEY, TH. D.,
Rector, St. Peter's Episcopal Church, Salisbury, Maryland.

The Reverend Robert Varley of Salisbury, Maryland, is a member of the Speakers' Bureau of the American Medical Association. In his presentation: "Are We Fighting A Battle We Can Win?" Reverend Varley offers us forthrightly a number of philosophical considerations which are only incidentally related to medicine's battle to remain free, yet point up the real disease of which our problem is but a single symptom.

IT is a distinct privilege for me to stand before you and to share with you some observations of my own, on a matter of mutual concern. Nothing pleases a clergyman more than to have a captive audience. I must further admit that seeing a group this large does make me want to pass a collection plate. You see, we who deal in "eternity insurance" cannot gain our objectives by merely increasing taxes!

Also, I must note that your program committee must have had experience in dealing with speakers who are clergymen, for they not only assigned me my text, but they gave me a time limit, as well as wanting to read what I had to say ahead of time. Well, I like the text assigned, and I trust that I can stay within the allotted time!

Your program gives my text. A text is something a clergyman uses as a launching pad, promptly departs from, rarely, if ever, returns to, and has little or nothing to do with what he has to say. But I hope to prove this wrong. If we examine closely the topic at hand, this short phrase has within it all the words that are necessary to our concern.

"Are we fighting a battle we can win?"

All of us here are products of our age. Ours is an age with many faces. Ours is an age conceived in the dying decades of the industrial revolution; an age born in the tumultuous decades of scientific striving; and an age left to mature in the decades of a time whose character has not yet been determined. There is one thing we can say for certain about these decades—these have been and still are decades in which men have gone to battle and will still go to battle. And only as men of conviction fight can a victory ever be won. When men of conviction cease to fight, true freedom will perish from human society—perish a victim of the virus of apathy.

Delivered at The American Medical Association's Public Relations Institute, Thursday, August 31, 1961, Drake Hotel, Chicago, Illinois.

The battle grounds of our times have been as various as the men and women who waged the wars. The factory floors of England and America were, and still are, the battle grounds for the economic warfare wherein the contestants skirmish for men's minds. The one seeks to preserve human enterprise and individual ingenuity; the other seeks to submerge selfhood in the collective pot of conformity. The laboratories of science have ceased to be solely the battle ground where men fight human suffering and disease. They have, in our own time, become pawns of power for those who would submerge individual striving in the labyrinth of legislative control.

Perhaps the lines of battle are more closely drawn in the halls of education than anywhere else in our society. Our century has seen the educational processes of our land become the spawning ground for the fuzzy thinking of idealistic idiots who can find security only by submerging the ceaseless striving of individual intelligence in the swamp of socialistic scheming. All too often, socialistic planners wearing the honored habit of academic achievement hand down magnificent manifestoes of human living which are not only removed from reality, but are truly insensitive to the basic concept of life—a concept given by God in the very act of creation—the freedom to choose. To be free, a man must be free to choose! Man must live between the pull of heaven and the tug of hell. But he must be free to choose. Any system, any scheme, any plan which violates this dogma of dignity carries within it the seed of its own destruction.

It must not be overlooked that this battle is also being waged in the sanctuaries of faith also. Religion is life, and as such, organized religion reflects in its thinking today those who strive to preserve individual dignity and integrity—the pull of heaven; and those who seek safety in the cult of conformity—the tug of hell.

These battles are but symptoms of a cultural cancer creeping ceaselessly over all men who live lives in this age of tumult. Yes, we are engaged in a battle! Yes, we are fighting! Battles are always tragic, for they not only pit brother against brother, but even the victor suffers losses. The character of victory is found in the quality of sacrifice! The quality of sacrifice is found in the quantity of self-investment! The warfare of our times is total! To the victor goes the minds not only of those of us thus engaged, but also the minds and bodies of generations which have yet to see the dawn of day.

I believe that you here present must first realize that because you are on the battlefield does not mean that you started the war. The medical world has always been the prime target for pseudo-social planners, not because you are rich and powerful, as some would have the world believe, but rather because your training and professional insight represent the greatest threat to these idiot ideologists. Perhaps you do not realize it, but unless the medical world can be made the servant of socialism, the adversaries of individuality have lost the war before it really gets going.

Have you ever stopped to think what has made modern medicine in America great? The answer is your blessing and your curse. Modern medicine has molded the most fiercely independent profession in the world. Modern medicine rests upon the foundation of individual integrity, individual enterprise, individual initiative, and quite often independent action. The history of medical science is a list of individual biographies of heroes whose contributions to the well-being of man have freed us from the dread of disease.

Now is not the time for fierce independence. True maturity is found in a state of dependent-independence. The battle which rages around us is not the AMA's battle. It is our battle. It is not the physician fighting to maintain his independence. It isn't even the American physician fighting to preserve his patient's right to choose. The magnitude of the struggle is far more than this. Literally, we are engaged in a common battle against a common enemy. If we allow the world to view this as "the doctor's fight", then we will succumb to the oldest military strategy in the world— divide and conquer. We are in a fight, and we are in it together to win!

Can we win? If victory is our goal, let history be our tutor! The pages of history are filled with the record of battles won and battles lost. In the lessons lie the answers we seek. Briefly, every man who has waged a war against an enemy—be that enemy a legion of men, a virus of destruction, or a philosophy of evil—has triumphed by wisely using four words—situation, problem, stategy, and tactic.

The present situation is well known; the cult of collectivism seeks through legislative action to socialize American medicine. The evils which Europe now seeks to shed are seeking new spawning grounds in America. This same situation finds expression in American industry and labor, in American education and professions, and yet, even in American religion and social life. The cult of conformity seeks to melt us down in the cauldron of collectivism.

To handle a single situation is not eradicating the underlying cause which gave birth to our present situation. A physician does not seek to relieve only a single symptom. He seeks to eradicate the causative agent. Then, and only then, can the patient be returned to full health. It is never enough to stop treatment with a diagnosis. Therapeutic agents must be prescribed. (If help is needed, I am certain that legislative committees will be all too willing to tell you not only the effects of therapeutic agents, but their side effects as well.)

The underlying problem can be briefly stated—pseudo-social planners in our day are attempting to erect a socialistic superstructure on a democratic base. To fully understand the depth and magnitude of this problem, you must leave the atmosphere of your profession, and through exposure to the voices of other disciplines and professions, see how widespread the problem is. I know how busy the American physician is. I know that he hardly has time to read the professional journals which are part of his tools. But I must say that only as we lift our eyes from the limited horizon of our own profession and view the problem in its complexity can we ever wage a full scale war against our common enemy. You are living in and dealing with "an age of anxiety", "a lonely crowd", "the organization man", "the self in pilgrimage", and also "the cocktail hour". These are the voices of our time crying out to be heard by all men with a common concern.

To analyze the current situation and to diagnose the underlying problem leads inevitably to the third stage of battle—strategy. Once we leave our professional isolation, we become aware of allies in battle also. Professor William James once said "that those who are concerned with making the world better are the best start". A true strategist wants not only to know the strength of his enemy, he wants also to know the strength of his allies! From his allies he receives more than moral support. He receives man-power, supplies, aid and advice. Who in battle does not need allies? Who are your allies? We have heard from the adversaries. What have you heard from your allies?

One cannot hear from those one does not know! The American physician, and more particularly the American Medical Association, must reach out with as much vigor and determination for the help of its allies as it does to determine its detractors. The ancillary professions are filled with those not only willing but ready to join the fray but hesitate to do so until they are sought. They can be part of your "intelligence corps". They can provide depth to your reserves. Yes, they can even provide man-power in the day of battle.

Your stategy must include allied aid. Also your strategy must include means whereby the ranks of medicine itself can present a united front. All need not agree in philosophy. But all must agree in purpose. Currently, medicine is divided not only into specialties, but particularly in its approach. There are those in government medicine; those in academic medicine; those in research; those in hospitals, as well as those in "secular medicine". "A House divided cannot stand." Your strategy must include union within as well as without!

Adequate planning can come only in the light of all available resources!

Finally, the tactics of victory are found in an assault on reality! This is a real battle against real forces. We cannot afford to joust with the windmills of fantasy. A tactical invasion must be made upon the thinking of all our citizenry. The forces of folly have been doing this for decades. With platitude and promise, the minds of men have been swayed from the pathway of human enterprise. Ultimately as in the life of Jesus Christ Himself, you must first lead those whom you seek to serve. True leadership seeks to serve. The false leader feathers his nest with the dollars he seeks to deny those who by the stint of hard work would earn in honesty.

Is it wrong, I ask you, through united effort, to recall the minds of the American public to their God-given obligation of working with their own hands? Is it wrong to seek to have every man put his hands on the plow of his own choosing, rather than to have his hand stretched out to receive the beneficent crumbs from a super-government — crumbs for which he has paid twofold through taxes hidden and undefined.

It is wrong to expect the physician, the teacher, the clergyman to return to his role of guide and friend? When the mantle of leadership worn with dignity in generations past is allowed to fall from our shoulders, there are those forces all too willing to assume it and abuse it. Look at England today. Is there any virtue in being a physician in a state controlled medical system? The answer is written in the empty chairs in their medical schools. Yes, in a nation where only ten per cent of its population attend worship services—England—is there any virtue in being a clergyman? Where the mantle of guidance and friendship have been lost by neglect, the people follow other guides—blind guides who will fall into the ditch of their own digging.

The field of our battle is not in the labyrinth of legislature, not in halls of academic chambers, nor yet in committees of caucus. Our field of battle is in the homes where our people live, in the schools where they learn, in the offices and factories where they work, and in the churches where they pray. You cannot make a tactical assault on the forces against you unless you are in the field where these forces are at work! As the physician heals on the bed where the sick lie, let medicine lead in the streets where people live.

Are we fighting a battle we can win? Yes, we can win—win with men of good will.

Let full analysis of the current situation be your examination of symptoms. Let full understanding of the underlying problem be your diagnosis. Let adequate planning and forceful alliances be your prescription, and let a tactical assault on reality be your therapy of triumph!

With Goethe in "Faust", let us say:

"Yes, to this thought I hold with firm persistence
The last result of wisdom stamps it true
He only earns his freedom and existence
Who daily conquers them anew."

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SEMI-ANNUAL COUNTY ASSOCIATION MEETINGS

Hartford, Wednesday, September 27

HIGH MEADOWS, EAST GRANBY

Dinner and outing will be held at High Meadows in East Granby, Connecticut at 2:00 P.M.

Speaker: Mr. Samuel Ramsay
Subject: IS YOUR SENSE OF HUMOR SHOWING?

Fairfield, Wednesday, October 4

ROUND HILL CLUB, GREENWICH

Social Hour: 6:00 P.M. Business Meeting: 4:00 P.M.
Dinner: 7:00 P.M.

The two speakers will be Edwin L. Dawe, M.D., of Danbury, who recently testified at a Congressional hearing on medical care for the elderly, and Dr. Joseph L. Carwin, Jr., of Stamford. Dr. Carwin will tell his impressions of a trip to Russia in which he was a member of a visiting delegation of physicians from the United States.

New London, Thursday, October 5

LIGHTHOUSE INN, NEW LONDON

Social Hour: 5:30 P.M. Business Meeting: 8:00 P.M.
Dinner: 6:15 P.M.

There will be no speaker.

Litchfield, Tuesday, October 10

TORRINGTON COUNTRY CLUB, TORRINGTON

Cocktail hour: 6:30 P.M. Business Meeting: 5:00 P.M.
Dinner: 7:00 P.M.

Speaker: Burrill B. Crohn, M.D., Gastroenterologist, Mt. Sinai Hospital, New York
Subject: ILEOCOLITIS

Middlesex, Thursday, October 12

MONTE GREEN INN, MIDDLETOWN

Dinner: 7:00 P.M. Business Meeting: 4:30 P.M.

Speaker: Ralph D. Pendleton
Subject: THE THREE STRATFORDS

Tolland, Tuesday, October 17

OLDE HOMESTEAD INN, SOMERS

Dinner: 6:30 P.M.

Speaker and Subject to be announced.

New Haven, Thursday, October 19

WAVERLY INN, CHESHIRE

Dinner: 7:00 P.M. Business Meeting: 3:00 P.M.

Speaker: Mr. Douglas Ellice, Sales Manager, Eastman Dillon Union Securities & Company, New Haven.
Subject: PRESCRIPTION FOR A DOCTOR'S FINANCIAL FUTURE

Windham, Thursday, October 19

NATHAN HALE HOTEL, WILLIMANTIC

Dinner: 6:30 P.M. Business Meeting following dinner.

SAUNDERS BOOKS

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An ideal basic guide to the understanding and administration of anesthesia. Not only do the authors give you principles of today's safe anesthetic practice, but offer hundreds of practical hints rarely included in existing works. You'll find indications for various types of anesthesia, the effectiveness of each under different circumstances, and the hazards involved in their use. Inhalation, open drop, spinal, intravenous barbiturate and local anesthesia are all considered. For this *New (2nd) Edition* there are entirely new chapters on: *techniques of inhalation anesthesia; chemical absorption of expired carbon dioxide; physiologic effects of elevated carbon dioxide; intravenous techniques in therapy; an approach to asepsis in anesthesia; cardiac resuscitation and respiratory resuscitation.* The new external cardiac massage procedure is fully described and illustrated. New material is also included on: monitoring during anesthesia; vaporization of anesthetics; controlled hypotension; hypothermia; treatment of the comatose patient; etc.

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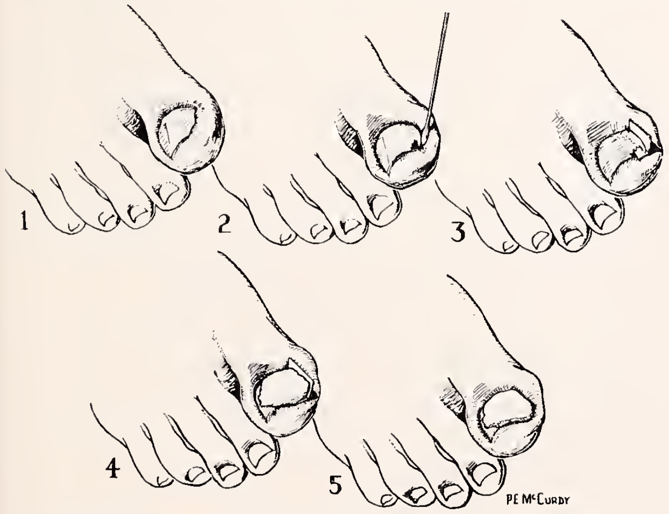
Special Article

A New Treatment For Ingrown Toenail

John O'Leary Nolan, m.d., *Hartford*

The Author. *Associate Visiting Surgeon, St. Francis Hospital, Hartford, Assistant Surgeon, McCook Memorial Hospital, Hartford, Consulting Surgeon, Institute of Living, Hartford.*

The ingrown toenail is certainly not a major surgical problem but it is painful, disabling and frequently leads to many, varied attempts at control only to end up with 'total ablation of the nailbed' which amounts to a tacit admission that nothing more can be done for the chronic sufferer. Even this procedure leaves much to be desired and can be followed by partial nail regrowth which can be as troublesome as the original difficulty. The basic pathology of the ingrown toenail arises when the soft cuticular flesh is steadily or intermittently compressed against a nail edge which has been broken or successively trimmed back so that it does not protrude far enough to keep the cuticular overlap displaced in normal alignment. This broken or shortened nail edge acts as a knife and lacerates the integument pressed against it as the nail continues to grow or is squeezed by snug stockings and shoes. An intense inflammatory reaction begins with the characteristic exuberant growth of red, juicy, frequently purulent, granulation tissue which becomes tender and disabling. The pus may have bacterial contaminants but is usually the product of foreign body type irritation. At this stage treatment and relief becomes the main object of the patient.



1. Typical 'ingrown toenail' with medial margin of nail covered with overgrown, granulating tissue. 2. Exposure of defective corner by displacing soft tissues. This done under local anesthesia. 3. Polythylene sheet, bent and inserted under and along nail margin. Nail ready to receive plastic material. 4. Plastic material spread on nail and drying. Packing and shaping done with the flat end of probe. 5. Final appearance before application of gauze. Note that the polythylene has been trimmed.

Relief of the acute problem has been obtained for years by displacing the soft tissues with a cotton pack but this method has been inadequate because of the difficulty in keeping the pack in place and also because the cotton packs became saturated with foul smelling exudate. It appeared to the writer that a reasonable way to correct this condition would be to find a relatively inert material that would adhere to the nail until the ragged edge could grow out beyond the cuticle. Applied to the nail it could be made to displace the cuticular flesh in the same way the cotton pack worked. When a particularly troublesome pair of ingrown toenails belonging to a first string football center were presented for relief an ArtyNail kit was purchased and the plastic material mixed up and applied to each great toenail in large enough quantity to cover the nail, fill in the defective corner and displace the soft flesh, reddened, tender, inflamed cuticle. The experiment proved to be a great success, the pain and tenderness were quickly relieved and the patient practiced and played outstanding football in complete comfort for the first time in many weeks. Subsequent cases treated in the same manner have confirmed the effectiveness of the method to such an extent that in the last six years not a single case has been treated by any other means. An unexpected feature, aside from the relief of pain within hours, is the amazing rapidity with which the drainage and granulation tissue *subside.* The method has been refined by inserting an angle of polyethylene sheeting along the lateral margin of the nail. It helps to buttress the cuticle away from the nail edge.

The technique is very simple and is carried out as an office procedure. Local anesthesia is usually necessary for the first treatment but subsequent nail applications are ordinarilly made without need for anesthesia. In this connection, it should be pointed out that the false nail may be knocked off or work loose by itself and must be replaced until the nail growth reaches safely beyond the lateral cuticular margin. This is a variable and false nails have been displaced in forty-eight hours and stayed in place as long as forty-five days. Experience has shown that even two or three days can elapse before a replacement is made without interference in recovery. The patient is instructed to come in within seventy-two hours after the false nail is lost.

The first step with the toe flat on the treatment table is to displace the encroaching cuticle and explore the lateral and distal edges of the nail which are usually buried in the inflamed flesh. Here one finds the broken corner or occasionally trimmed anterior edge with a spike on the corner of the nail. This is done with the flat end of a probe and the area dried thoroughly with cotton to receive the plastic nail.

The second step is to insert a thin piece of polyethylene sheet, bent at a right angle, down along the lateral edge of the nail as far as the point where the cuticle curves transversely across the proximal (growing) surface of the nail. The portion of the angled sheet which goes under the nail is trimmed to about a millimeter in width or just enough to hold it anchored under the edge, proximally. Toward the distal edge of the nail this surface is left two to three millimeters in width and frequently is the first or underlayer in filling the nail defact. The vertical component of this angled sheet keeps the cuticle away from the nail and forms a trough into which the plastic nail can be poured. The solvent is next painted on the dried nail and then the powdered plastic is dissolved in more solvent and generously heaped upon the nail and in the few minutes it takes to firm up it is packed into the trough and held until a tight bond has been created. The present material is powdered Plastodent and its solvent, the ArtyNail material having become scarce. When the material has hardened and adhered the polyethylene sheeting which may project above the surface of the 'new' nail is trimmed and a light tubular gauze bandage is used. The latter is mainly a reminder to the patient to be careful but there are no restrictions placed on his activities. The patient is given an extra length of the gauze for changing at home and advised to remove the gauze by cutting through its full length and then lifting each leaf laterally rather than pulling off the end like a stocking.

Further treatment consists of nail replacement until the desired amount of growth of the natural nail is achieved. This is reached when the lateral margin of the nail protrudes safely beyond the soft cuticular edge. The patient is instructed never to trim the nail edge back too far nor to round the corners.

This method has proved completely successful and its basis in restoring a normal growth pattern has proved to be the most important feature.

What the student of nature's mysteries always needs to remember is his position as viewing things from his own centre, rather than from the centre. What he has chiefly to avoid is that discouragement should not pass into denial. If our difficulties are great, our hope is assured that the organic laws, in their highest conception, correlate with laws of truth, and culminate in that moral nature expressed by the term holiness. Thus, only to those unconversant with the practice of medicine can it seem strange that, ever occupied as we are with the failures of humanity, the mists of physical and moral disease cannot obscure the brightness of that ideal perfection which the "law of life" casts upon our path.
— William Gull, Principles of Phychology.

Clinical Medicine

The Juxta Glomerular Cells and the Role of the Kidney in Blood Pressure Regulation

Louis H. Nahum, m.d., *New Haven*

How does the kidney regulate blood pressure? Physiologic regulation is relatively easy to understand. Over 25% of the total cardiac output flows through the kidney. Since renal parenchyma is quite resistant to prolonged ischemia, it is not difficult to see how intrarenal vasoconstriction can safely divert considerable quanties of blood to the general circulation. During exercise the circulation through muscles is increased. If the flow through the kidneys is at the same time reduced, the heart is spared extra work at the same time as the active tissues receive more oxygen. In traumatic or hemorrhagic shock there is inadequate circulating blood volume. The resulting fall in cardiac output is offset to some extent by renal vascular constriction. In heart failure of whatever etiology cardiac ouptut is insufficient for body needs. Again intrarenal vascular constriction occurs, but in such situations the reduced renal blood flow is prolonged and may persist indefinitely. The consequence of course is salt and water retention, hypervolemia and edema. The action of the kidney in the normal regulation of arterial pressure is carried out by diverting blood into the general circulation and by retaining salt and water. The diversion of blood into the general circulation is achieved through vasomotor regulation, while the retention of salt and water is accomplished by a much more subtle series of mechanisms primarily humoral in nature.

When the renal arteries are narrowed experimentally, there is also a reduction of renal blood flow and the systolic pressure downstream from the constriction is lowered. The kidney acts as if it were subjected to hypotension. Are there any cells which sense the lowered pressure in the renal arteries and react to it? The only really specialized cell in the wall of the renal arterial system are the juxtaglomerular cells. It is now established that any change in the arterial pressure locally changes the rate of secretion of the juxta-glomerular cells. Just as the vasoreceptor cells in the arch of the aorta and the carotid sinus respond to stretch by reflex mechanisms thereby serving to restore the blood pressure to normal, the juxta-glomerular cells also respond to stretch. This mechanism of arterial pressure regulation by the kidney is slower than shifts in blood flow through the kidney, takes time to develop, but is nevertheless a potent mechanism for regulating blood pressure.[1]

The Author. *Lecturer in Physiology, Yale University School of Medicine, New Haven. Consultant in Medicine, Grace-New Haven Community Hospital, New Haven, Hospital of St. Raphael, New Haven, Griffin Hospital, Derby, Middlesex Hospital, Middletown, Cardiologist at Milford Hospital, Milford.*

Whenever a kidney is exposed to hypertensive blood pressures in experimental hypertension the granularity of the juxta-glomerular cells decreases. On the otherhand if the blood pressure perfusing a kidney is diminished, the granularity of these cells tends to increase. When the perfusion pressure is raised in a normal isolated kidney to 167-192 mm. Hg. for 1-2 hours there occurs a marked degranulation of the juxta-glomerular cells. This will not occur if the kidney is perfused at a pressure of 80-85 mm. Hg. This indicates that these cells act as stretch receptors changing their rate of secretion with changes in the stretch of the walls of the afferent arterioles of the glomerulus.

In addition to stretch these cells also respond to electrolytes, a diet very low in salt significantly increases their granulation, in rats, dogs, cats, while a diet high in salt decreases their granulation. This correlation is found to relate to plasma sodium levels also. In fact the correlation of the granulation of juxta-glomerular cells is better with plasma sodium levels even than with blood pressure. One explanation of the effects of dietary sodium on the granularity of the juxta-glomerular cells is related to the plasma volume. Animals with little sodium intake have a lower blood volume which decreases the blood pressure, reduces the stretch on the juxta-glomerular cells and stimulates their granulation. The diet high in sodium produce the opposite effect, i.e. increased blood volume, higher pressure against the juxta-glomerular cells this leading to their degranulation.

One very significant observation which has relevance to the role of the kindey in the development and maintenance of hypertension is derived from the experiment of clipping one renal artery. The granules of the juxta-glomerular cells in the clipped kidney greatly increase, while the granules of the juxta-glomerular cells in the unclipped kidney virtually disappear. The clipped kidney suffers from hypotension while the unclipped kidney suffers from hypertension. When all the facts available are taken into consideration it seems reasonable to believe that hypergranulation is associated with an increased rate of secretion and degranulation with a decreased rate of secretion.

The kidney that is perfused at a low pressure and showing increased granulation of the juxta-glomerular cells shows a release of renin while a kidney perfused at a high pressure shows a disappearance of renin in the venous blood and a disappearance at the same time of granulation of the juxta-glomerular cells. It would appear that a state of hypergranulation of the juxta-glomerular cells corresponds to a state of hypersecretion of renin and that the juxta-glomerular cells are the source of renin. The secretion of renin apparently depends upon the volume of blood in the afferent arteriole and or the stretch of the juxta-glomerular cells. A greater volume or a higher pressure causes renin secretion to come to a halt. A lower volume or a lower pressure causes the secretion of renin to be resumed.

This view is strengthened by studies in which renin is extracted from kidneys with hypotension and hypertension that have been produced experimentally by a wide variety of techniques. In each instance if the juxta-glomerular cells show increased granularity the kidneys contain increased amounts of renin while those with decreased or absent granularity of the juxta-glomerular cells contain almost no renin. It would thus appear that renin is probably the substance secreted by the juxta-glomerular cells. The fact that the amount of extractable renin responds so predictably to diverse changes in arterial pressure and sodium intake strongly supports the conclusion that renin is a part of some regulatory system and not merely a constant structural kidney protein. Goormaghtigh many years ago theorized that the granules in the juxta-glomerular cells contained renin. In recent years it has been noted that the bulk of renin can be found only in areas containing glomeruli but not tubules. Even the glomerular tuft does not contain renin. It is obvious then that the juxta-glomerular cells are the site of the renin containing part of the kidney.

With the isolation of renin its pharmacologic effects can be studied. Injection of renin causes a hypertrophy of Zona Glomerulosa of the adrenal. At the same time as it causes hypertrophy of Zona glomerulosa of the adrenal, renin injection reduces granularity of the juxta-glomerular cells. Renin also produces massive proteinuria by increasing the permeability of the glomerular capillaries. Renin injections combined with a high NaCl intake produces severe arteriolar and glomerular disease, sodium retention, edema, ascites, hemorrhages and thromboses somewhat resembling the pathology of eclampsia. In other words sodium retention enhances the damage in tissues especially smooth vascular muscle produced by injections of renal extracts. It is of interest to note that the kidneys of salt-water fish do not contain renin, while the kidneys of fresh water fish which must conserve sodium, do contain renin. It is clear that renin must play a significant role in the biological economy of sodium. It appears therefore that renin is an agent which is formed by the juxta-glomerular cells in response to reduced stretch and enters the blood stream. It would thus be expected to appear in the blood of those types of renal disease in which the pressure against the juxta-glomerular cells is reduced. Such conditions are reduced flow through renal arteries due to atherosclerotic narrowing; reduced flow through the kidneys caused by external pressure on the kidneys by capsular contraction and reduced flow caused by widespread microclipping of the renal arterioles in chronic pyelonephritis. It appears as though renin were strategically placed in the kidney so that pressure effects from the blood could affect its release. What is the fate of this renin? This matter has now been untangled sufficiently so that the following steps are known. Renin and A^2 globulin → angiotension I which is a decapeptide. This is quickly reduced to angiotension II an octapeptide which has two powerful actions. In minute quantities it is a powerful vaso- constrictor. At the same time it causes the liberation of aldosterone which is a salt retaining steroid of high potency. In moderate salt retention there is expansion of blood volume and consequently a tendency for the blood pressure against the juxta-glomerular cells to return to normal at which time renin secretion is terminated.

We end up with a postulate that a specific endocrine system controls sodium balance by employing a renal hormone, renin, to regulate aldosterone secretion. Like many regulatory systems in the body it can operate to excess or its opposite. Excess secretion of renin is known to occur in malignant hypertension. Excess secretion of a similar polypeptide hysterotonin (is present in) eclampsia. The loss of these mechanisms occurs in Addison's disease where no aldosterone can be formed and sodium wasting and hypotension ensues.

The normal kidney therefore guards the arterial pressure in two ways, one rapid, the other slow. The rapid method is neurogenic in origin, acts quickly to divert renal blood flow into the general circulation, the slow method is humoral in nature, slower in operation but in the end brings pressure in the renal arteriole back to normal. If our understanding of this mechanism is correct then the hypertension associated with reduced renal blood flow is a compensatory phenomenon by renin and aldosterone to bring the pressure against the juxtaglomerular cells back to normal.

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DECLARATION OF GENEVA

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due;

I will practice my profession with conscience and dignity;

The health of my patient will be my first consideration;

I will respect the secrets which are confided in me;

I will maintain by all the means in my power, the honor and the noble traditions of the medical profession;

My colleagues will be my brothers;

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient;

I will maintain the utmost respect for human life, from the time of conception; even under threat; I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely and upon my honor.

Around The State

Naugatuck Valley Medical Society

In response to the concern and interest of the public in the matter of bee stings which occurred following a recent fatality in the area from a bee sting, the Public Relations and Information Committee of the Naugatuck Valley Medical Society, in cooperation with the local hospital medical staff, compiled a 14 point program of suggestions to the public concerning measures to take in the prevention and management of bee stings. This was released to the press and radio on September 1, 1961.

The Naugatuck Valley Medical Society Women's Auxiliary's Scholarship Ball will be held on October 28, 1961 with all proceeds going into the Society's Polio Clinic Scholarship Fund.

On September 21 and 22, members of the Society held a "Research Seminar" in Rensselaer, New York as guests of Winthrop Laboratories.

At a special meeting on August 15, 1961, the Naugatuck Valley Medical Society unanimously approved the following statement which was forwarded to the Secretary of Health, Education and Welfare, Abraham Ribicoff, and Representative Wilbur D. Mills, Chairman of the House Ways and Means Committee, and released to the local press:

"Regarding the changes made that Secretary of Health, Education, and Welfare, Abraham Ribicoff, had allegedly stated that the American Medical Association takes or threatens to take sanctions against its members who openly or tacitly oppose its official position against compulsory federal financing of the aged's medical bills, the Naugatuck Valley Medical Society following a unanimous vote made the following statement at a special meeting on August 15, 1961:

'At no time has the membership of this Society ever been threatened or endured sanctions by the AMA because of opposition to any of its policies. The very thought of such action is ridiculous as the AMA is a democratic association and does not possess such powers over individual members. Because the AMA, over the years has provided thoughtful and dedicated leadership in American medical care, the Naugatuck Valley Medical Society expresses its continued confidence in the AMA and its duly elected officers.'

At the September 12, 1961 meeting, the results of a local poll on whether or not the members favored inclusion of physicians in the Social Security system were announced and these results will be forwarded to the Connecticut State Medical Society for its information. At this meeting, a symposium on local medical ethics and deportment was held with several recommendations made for the improvement and maintenence of local ethical behavior.

New Haven County

Nicholos D. D'Esopo, chief of the pulmonary disease service at the West Haven Veterans Administration Hospital and member of the board of directors of the Connecticut Tuberculosis and Health Association was on the program of scientific discussions at the 16th International Tuberculosis Conference held in Toronto, Canada last month.

Doctor's Office

Frederick S. Bird, M.D., announces the opening of an office for the general practice of medicine at 81 Main Street, Bristol.

William P. Canty, M.D., anounces the opening of an office for the practice of obstetrics and gynecology at 1107 New Britain Avenue, Elmwood.

Harold M. Dolberg, M.D., announces the opening of an office for the general practice of medicine in association with Dr. Reuben I. H. Solway at St. John's Place, Westport.

James B. Fanning, M.D., announces the opening of an office for the practice of internal medicine at 140 Washington Avenue, North Haven.

Lloyd C. Fisher, M.D., announces the opening of an office for the general practice of medicine in association with Dr. Samuel A. Rose at 65 South Street, Stamford.

Karl R. Friedmann, M.D., announces the opening of an office for the general practice of medicine in association with Dr. Edward Allen at Old Boston Post Road, Old Lyme.

S. Jack Landau, M.D., announces the opening of an office for the practice of internal medicine and cardiology at 315 Whitney Avenue, New Haven.

Elliott Polsky, M.D., announces the opening of an office for the general practice of medicine in Moore's Plaza, Branford.

Louis F. Raymond, M.D., announces the opening of an office for the practice of ophthalmology at 139 Danbury Road, Ridgefield.

Charles N. Sullivan, M.D., announces the opening of a second office for the practice of dermatology at 51 Jerome Avenue, Bloomfield.

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Letters To The Editor

Chicago, Illinois
August 15, 1961

Louis H. Nahum, M.D., Literary Editor
Connecticut Medicine
160 St. Ronan Street
New Haven 11, Connecticut

Dear Doctor Nahum

Your editorial entitled "Quo Vadis" is a joy to read. You have put your finger on the increasingly political nature of our society and have stressed the importance of the physician understanding his role in the political scheme of things.

I have the privilege of lecturing to the medical students at Northwestern University School of Medicine on medical economics each year. This Fall I shall use your editorial as my taking off place. I appreciate the clarity with which you have presented your thinking.

Sincerely yours
Hiram Sibley
Hiram Sibley, Associate Secretary
Council on Blue Cross, Financing
and Prepayment
American Hospital Association

New Haven, Connecticut
August 11th, 1961

Louis H. Nahum, M.D.
1142 Chapel Street
New Haven, Connecticut

Dear Doctor Nahum:

This is a brief note to tell you how much I enjoyed the thought behind your "Quo Vadis".

The philosophy behind it is important.

With best regards, I am

Very sincerely yours,
R. M. Fasanella, M.D.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following:

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Auxiliary Fall Conference

The Eighteenth Annual Conference of National Officers, Directors, Chairmen and State Presidents and Presidents elect, will be held October 1st to 4th, 1961 at the Drake Hotel in Chicago. Mrs. George J. Rosenbaum and Mrs. Norman H. Gardner will attend as Connecticut's representatives.

On Sunday October 1st the National Auxiliary will entertain the conference delegates at dinner, with the regional vice presidents presiding for their respective sections. Dinner will be followed by a program "Doctors' Wives In Other Lands".

The conference will open on Monday with the call to order by Mrs. Harlan English, President, after which the conference presiding officer, Mrs. William G. Thuss will conduct the opening session. Subjects to be discussed on Monday will include "Medicine And The Church", Mental Health, Bulletin, Legislation, and a discussion in the round by the presidents and presidents elect.

Tuesday will find the conference members absorbed with parliamentary procedures, A.M.E.F., Today's Health School Project, Membership, Safety, Health Careers, Rural Health, Civil Defense and Procedures. Tuesday afternoon Mrs. English will hold a conference with national chairmen, and Mrs. Thuss will confer with state presidents elect.

The conference will close on Wednesday with a session at A.M.A. headquarters. Delegates may tour headquarters before the meeting opens with the film "Old Man Young" which is a study of the opportunities and rewards of retirement, and a positive view of the later years that can be useful and rewarding.

Announcements, "Programs Made to Order", and the A.M.A. Roundup and a clinic for auxiliary problems with Ernest B. Howard, M.D. presiding at the clinic and the roundup will conclude the meeting.

This conference is the annual opportunity for our state leaders to bring National close to us and to exchange ideas with other state delegates.

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Facilities For Rehabilitation

There has been a steady growth of facilities for rehabilitation since World War II, but especially in the past five years. The increase in average age has been concomitant with an increase in chronic diseases with residual physical disabilities. These include the vascular and cardiac disorders, such as hemiplegia or amputation. The increase in accidents with paraplegia, quadriplegia or the C.N.S. disorders such as Poliomyelitis, Multiple Sclerosis or Polyneuritis also imply long term rehabilitation.

A rehabilitation center is a medical facility in which there are available all those specialized services required for the diagnosis, evaluation and management of the physically handicapped patient. Such a center should have available consultants in all necessary medical specialties. Since the treatment is often mainly physical in nature, there should be a completely equipped department of Physical Medicine and Rehabilitation under the direction or supervision of a specialist in this field. Rehabilitation services include; Physical and Occupational Therapy, Orthotic (braces) and Prosthetic Services, Speech Therapy, Vocational Counseling, Psychological Evaluation and Guidance, Social Service and adequate recreational outlets. These facilities may be in-patient, out-patient, or combined.

Many Connecticut hospitals have departments of Physical Medicine. Rehabilitation wards have been established by the State of Connecticut in several previous Tuberculosis hospitals. The V.A. Hospitals have set up complete Physical Medicine and Rehabilitation Services. Private hospitals for chronic diseases and rehabilitation of adults and a children's hospital are established and there are a number of out-patient centers in various cities for the ambulant patient or for those who can be easily transported.

Who may benefit from admission of a Rehabilitation Center? All patients with protracted physical disabilities should be considered. The extent of care necessary will determine the type of facility needed. The patient who needs limited services such as Physical and/or Occupational Therapy and who can travel or be transported conveniently, may need only periodic out-patient care. One who needs the full gamut of rehabilitation care, or is too severely handicapped to be transported or cared for at home, needs intensive in-patient care. Many patients who are sent to convalescent hospitals or homes would recover more rapidly or reach a higher level of functional ability in the rehabilitation hospital. It has been stated that forty percent of the patients in convalescent hospitals could be benefited by rehabilitation care. The ability of any patient to achieve independent self-care, will free family or attendants and reduce the cost of continuing care.

The family physician must be the keystone of all medical care. Upon his referral, the rehabilitation process can be started. The patient, upon discharge, must again be integrated into his community as a functioning member. If the physician is unaware of or uninterested in such care, the patient's progress can be easily interrupted. The physician should be aware of these facilities and use them to the patient's benefit. The Rehabilitation facility must consider the family physician a member of the team, keeping him informed of the patient's course of therapies and working out the discharge planning with him. Since the length of patient stay in these facilities may be long, much patience and understanding will be needed by all concerned. Bedfast inactivity should be replaced by increased function whenever possible.

The cost of long term hospitalization or treatment is great and beyond the means of many families. Means of financing such care must be sought by all citizens. The physician should be aware of the programs available for payment of services from major medical insurance, and from private or state agencies as needed. The cost should not prohibit good medical care and programs must be developed as such medical needs arise; conversely, all rehabilitation hospitals must operate at as reasonable a cost as possible.

Rehabilitation services do not limit their focus to an individual's disabilities. They consider his remaining abilities and help him use them in a practical satisfying way.

Thomas F. Hines, M.D., for the Committee on Rehabilitation.

Book Reviews

HEART SOUNDS AND MURMURS: A Clinical and Phonocardiographic Study by P. A. Ongley, M. B. Rappaport, Howard B. Sprague and A. S. Nadas. Grune & Stratton, New York and London, 1960, 351 pp.

REVIEWED BY LOUIS H. NAHUM

Years ago before the era of cardiac surgery and cardiac catheterization murmurs and even heart sounds were heard but not always understood. This was not a great loss to the patient since nothing could be done about it and Dr. James McKenzie's emphasis upon heart muscle function, rather than on valvular structure held almost universal sway.

In recent years the demand for accurate diagnosis of valvular defects because of the availability of cardiac surgery and the development of expert equipment for recording heart sounds and murmurs have combined to cause a searching analysis of sounds, murmurs and rhythmic alterations. Several books in recent years have appeared—McKusick on *Cadiovascular Sound*; Levine and Harvey on *Auscultation Of The Heart* and now this one on *Heart Sounds And Murmurs*. The book consists of six sections, one, on history and physics, another on heart sounds and murmurs; a third on diseases of heart valves, a fourth on rheumatic heart disease, a fifth on congenital heart disease, and a final one called miscellaneous which deals with arrhythmias, constrictive pericarditis, arterial hypertension, and syphilitic aortitis and aortic insufficiency. Each section is followed by an extensive bibliography of basic references.

There is no doubt that this is a scholarly work of wide scope and great merit and covers in a few pages the origin, occurrence and meaning of cardiovascular sound. The physics of sound as it relates to auscultation and phonocardiography and also the descriptions of various recording devices commonly used in the study of heart sounds and murmurs was excellently covered by the late M. B. Rappaport an acoustical engineer of the Sanborn Company. The history and important contributions to clinical auscultation from the time of Harvey in 1628 to Castex who in 1923 described the splitting of the first and second sound in bundle branch block, are listed. A short chapter follows on the history of stethoscope with quotations from Harvey, Corvisart and Laennec.

Anyone who wishes to enjoy the intellectual pleasure of understanding heart sounds and murmurs in health and disease can do no better than having this book to refer to.

MEDICAL PHARMACOLOGY by Andres Goth, M.D. C. V. Mosby Co., St. Louis, Mo., 1961, 551 pp. $11.00.

REVIEWED BY LOUIS H. NAHUM

There are at least three kinds of books. One which tends to cover all the material in a chosen subject, it aims at a fairly complete presentation and is bound to become very large. It is bound to be impractical for several reasons, especially in the field of drugs. In the first place, knowledge is accumulating rapidly and books get out of date quickly. In the second place, a complete textbook is only for experts in the field. For non-experts, it becomes voluminous and much of it non-utilizable by students, interns and the practicing physician.

Another kind of book is the one in which an author limits himself to the essentials. In this case, it is difficult to incorporate into such a book those aspects of pharmacology wihch could give it authority as a basic science. A third kind is one which is written primarily for medical students and physicians. It attempts to emphasize principles and concepts rather than the factual information which can only be retained by memory and which is often quickly forgotten. If this is successfully done one can come out with a relatively modest sized book, but one that contains the elements of pharmacology which students of medicine need for their future growth. Such a book will not quickly be outdated and can become a permanent addition to one's library. Such a book is this one by Andres Goth, Professor and Chairman of the Department of the University of Texas, Southwestern Medical School.

It is clear that space has been saved in two ways. There is no repetitious discussion of compounds with little or no clinical or theoretical importance. Current pharmacologic knowledge has been presented with reference to principles and concepts.

The book consists of fifty chapters in eleven sections and each devoted to the special systems in the body. There is a fine chapter on poisons and antidotes. A chapter on prescription writing and at the end under new approaches to therapy is a short sensible page on pharmacologic approach to atherosclerosis. This is characteristic of the authors whole approach sane, learned, practical. This is a good book to refer to by students and physicians and should fill a need in making clear the central facts of the rapidly expanding field of clinical pharmacology.

REVIEW OF ATLAS OF OBSTETRIC TECHNIC by J. Robert Willson, M.D. The C. V. Mosby Co., St. Louis, Mo., 1961, 301 pp.

REVIEWED BY C. D. DAVIS

This is designed, according to the author, solely to explain obstetrical technic to the resident, general practitioner or general surgeon. This reviewer finds that it spends so much time with elementary obstetrics that he does not belive it would be of much value for any professional group other than nurses, medical students or the occasional obstetrician.

There are several statements with which this reviewer would take issue, such as light packing of the vagina when hemostasis is incomplete with a vaginal tear. In such an instance the reviewer belives packing of the vagina is contraindicated, as it may only mask bleeding. The technic of uterine packing is described but no indications are given.

In a frank breech the author recommends interference as soon as the groin appears, with no caution as regards speed of delivery.

The illustrated method of tying the cord seems frought with a certain amount of danger, as the hands are not kept together to prevent slipping and the possibility of tearing the cord off at the umbilicus.

The book is published in regular and deluxe editions. The only distinguishing factor of the latter is the better quality of paper and, of course, a higher price tag.

To accentuate the positive, the illustrations are by and large very clear and easily understood.

To reiterate, this reviewer does not believe this book has much value for the serious student of obstetrics.

EPIDEMIOLOGY OF MENTAL DISORDER. Edited by Benjamin Pasamanick. Publication No. 60, of the American Association for the Advancement of Science. Washington, D. C., 1959, 336 pp. $6.50.

REVIEWED BY STEPHEN FLECK, M.D.

This volume contains the papers and discussions presented at the 1956 meeting of the American Association for the Advancement of Science in commemoration of Emil Kraepelin's one-hundredth birthday. The first chapter is Eugen Kahn's memorial lecture, an admirable biographic sketch and comment on Kraepelin's work. This expose by one of his most distinguished co-workers is frank, succinct and void of cliches and uncritical adulation.

The remainder of the volume has little enough to do with Kraepelin. Professor Kahn points out that Kraepelin's psychopathological formulations are classic even though Kraepelin himself spoke in later years, as did Bleuler also, of disease groups rather than of entities. In paper after paper in this volume the difficulty of applying epidemiological methods to psychiatric diseases according to Kraepelinian classifications, treating them like laboratory diagnoses are pointed up, often by the authors, always by the discussants.

To the student of epidemiology, and mental health epidemiology in particular, the discussions are urgently recommended as models of high level criticism of research performed and desgined by the most competent workers in this field. It is a pity that the volume appears more than three years after the Symposium and most of the contents of the papers are already available in other books and journals. However, complete publication of the critical discussions render this book worth while as does Dr. Kahn's lecture.

REVIEW OF MEANING AND METHODS OF DIAGNOSIS IN CLINICAL PSYCHIATRY by Thomas A. Loftus, M.D., Associate Professor of Clinical Psychiatry, The Jefferson Medical College, Philadelphia, Pennsylvania. Publisher Lea & Febiger, Philadelphia, Pennsylvania, 1960, 160 pp. $5.00.

REVIEWED BY HENRY WEXLER

This is a useful handbook on the subject for the student, the interne, the beginning psychiatric resident and the general practitioner. Its eclectic approach is hailed in the Foreword as a "welcome return to sound medical principles". Whether one's understanding is enhanced by views from many frames of reference each of which is given equal emphasis is, to say the least, doubtful. Eclecticism per se has little to do with sound medical principles. Something for everyone often adds up to very little for anyone. As things are today, however, it is not to be avoided in the story of psychiatry and the student might as well be exposed to it early as later. His eventual adoption of the eclectic approach or the singling out one or the other theory for himself will depend on factors outside the consideration of this review which is to inquire whether this is a readable, informative and useful book about meaning and methods of psychiatric diagnosis. The answer is affirmative for all three though the information disseminated is inevitably weakened by its attempt to compress into small size a vast area of study. Nevertheless as a compendium it is recommended for those who wish certain basic essentials of psychiatric diagnosis presented succinctly and more or less meaningfully.

HAEMOPOIESIS CELL PRODUCTION AND ITS REGULATION by G. E. W. Wolstenholme and Maeve O'Connor, Editors for the Ciba Foundation, Ciba Foundation Symposium. Little, Brown & Co., Boston, Massachusetts, 490 pp. $11.00.

REVIEWED BY J. W. HOLLINGSWORTH

Symposia on hemopoiesis have been held within the past two years by several organizations, and the latest one was in London in February, 1960, under the sponsorship of the Ciba Foundation. Dr. J. M. Yoffey, Professor of Anatomy at the University of Bristol, organized the group. The papers have been published by the Foundation under the title, *Haemopoiesis. Cell Production and Its Regulation.*

These several symposia on hemopoiesis reflect the fact that modern techniques have infused new vigor into an old field of biologic investigation that started some 50 years ago with the histologic observations of Maximow. The problems are the same: the origin, growth characteristics, and controlling mechanisms of blood cells.

The incorporation of tritiated thymidine into nucleoproteins of cells has been the most recent tool for investigations. Yoffey, Everett, Cronkite and others reported their observations with this method, particularly as applied to the study of multipotential 'stem' cells and lymphocytes. Gordon reported a series of new studies on humoral factors controlling granulocyte productions, and Craddock discussed granulocyte release and lifespan. Another major area of investigation, the erythrocyte stimulating factor, 'erythropoietin' was the subject of papers by Linman & Bethell, Van Dyke, and Jacobson.

In all of these fields, the investigations are still quite active and do not permit any final summary at this time. However, all the papers were well written and the provocative general discussions after each paper help the reader put the material into perspective. Perhaps, in a few years, another symposium on this subject will yield more definitive answers to the important biologic problems of control of hematopoiesis. In the meantime, the papers in this symposium offer stimulating reviews of the work in progress.

AN OUTLINE OF CHEMICAL GENETICS by Bernard S. Strauss, Ph.D. W. B. Saunders Co., Philadelphia, Pennsylvania, 1960, 188 pp. $5.00.

REVIEWED BY HERBERT LUBS, JR., M.D.

There are many delightful features of this short book, which is largely a summary of the most significant experiments in microbial genetics. The most important of these is Strauss' ability to retain the basic simplicity of the experiments in microbial genetics. The Nobel prizes given for work in the field of bacterial and phage genetics in the past several years testify both to the necessity and stimulating effect of this work. Indeed, as described in the second chapter (The Chemical Nature of Hereditary Material), almost our entire knowledge of the role of DNA in man derives from experiments in microbial genetics. Without an understanding of the terminology and techniques of this field it is difficult to truly grasp the use of the terms in medicine. Only in the field of abnormal hemoglobins has our knowledge of gene action in man progressed to a comparable point. Strauss' presentation is orderly, historical when appropriate, and above all reliable and lucid.

Chapters one and five deal with the control of protein synthesis and nucleo-cytoplasmic relationships. Most of the experiments cited can be described as elegant, but sevceral by Zalokar have a particularly appealing simplicity. Neurospora consist of stands of cytoplasm surrounded by a tubular wall and divided by septa in a bamboo-like fashion. The neurospora were used as their own centrifuge tube and the contents of each segment (nucleus, mitochondria, microsomes, etc.), were stratified in a special centrifuge. A labeled RNA precursor was introduced and RNA was shown to be formed in the nucleus and then moved up the strata to the ribosomes (a site of protein synthesis). In this fashion the manner in which the DNA and the nucleus control synthesis of protein in the cytoplasm through RNA can be demonstrated. This process is of extreme significance to medicine since it is not unlikely that we will be able to alter this control in man in the not too distant future (perhaps by giving various types of RNA), and that a very basic form of therapy for genetic, and biochemical disease will be apart of our armamentarium. In the interim it is one of the grandest stories in science, and Strauss has captured this spirit admirably. Additional chapters on The Molecular Meaning of Genetic Recombination, Mutation as a Chemical Process, and finally The Biochemical Genetics of Man complete the story.

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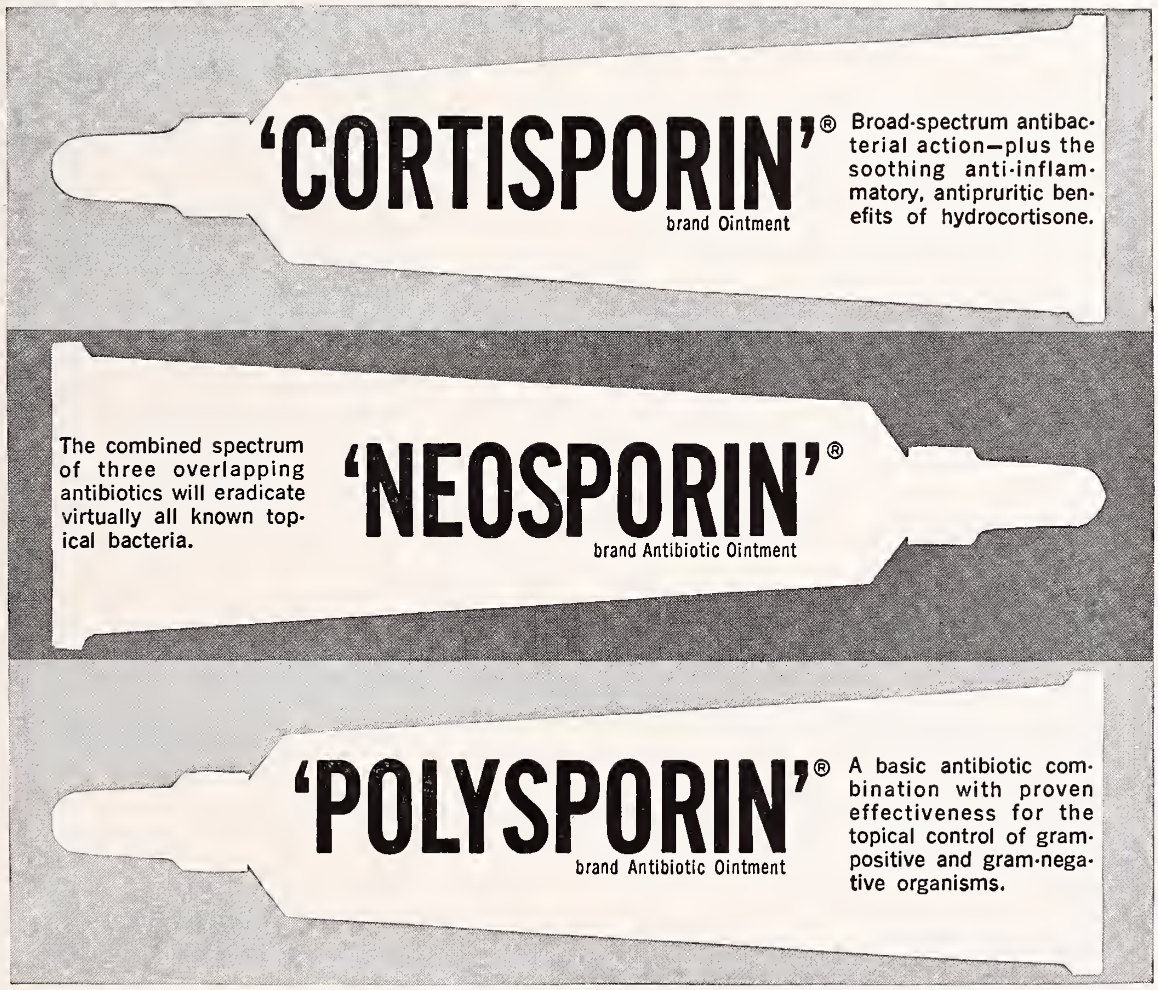

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Special Notices

MEDICO-LEGAL COURSE: SCIENTIFIC INVESTIGATION IN CRIMINAL JUSTICE

Sponsored by the
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November 3-4, 1961

Friday, November 3:

9:30 Introduction: William J. Curran, LL.M., S.M.Hyg., Director, Law-Medicine Research Institute

9:35-10:30 I. The Techniques of Preparing for and Prosecuting Criminal Cases
Edward F. Hennessey, Esq., Editor-in-Chief, *Massachusetts Law Quarterly;* formerly Asst. District Attorney, Middlesex County, Mass.

10:30-11:30 II. Forensic Pathology I:
The Medico Legal Autopsy—Determining Cause of Death in Suspected Homicide Cases
Milton Helpern, M.D., Chief Medical Examiner, The City of New York

11:30-12:30 III. Forensic Pathology II: Rape and Sex Offenses
Richard Ford, M.D., Head, Department of Legal Medicine, Harvard Medical School

LUNCHEON

12:30-2:00 Speaker: Professor Norval Morris, Dean of the University of Melbourne Law School

2:00-3:00 IV. Scientific Crime Detection I: Fingerprint and Firearms Identification, Comparative Micrography, Trace Evidence
Dr. Joseph D. Nicol, Director, Illinois State Bureau of Criminal Identification and Investigation

3:00-5:00 V. Scientific Crime Detection II: Lie Detector Technique—Scope and Limitations, Medico-Legal Basis—Demonstration of Polygraph
Mr. Lynn P. Marcy, Allied Security Consultants, Detroit, Michigan

Saturday, November 4th:

9:30-10:30 VI. Forensic Pathology III: Gunshot and Blunt Instrument Wounds
Russell Fisher, M.D., Chief Medical Examiner, State of Maryland

10:30-11:30 VII. Forensic Toxicology: The Problem of the New Drugs in Poisoning Cases
Arthur J. McBey, Ph.D., Consultant-in-Charge of Chemical and Toxicology Laboratories, Mass. Dept. of Public Safety

11:30-12:30 VIII. Trial Technique—Panel Discussion
Introducing Exhibits in Evidence—Presenting Medico-Legal Photography, Ballistics, Chemical Tests, etc.
Stephen A. Moynahan, Esq., Springfield, Mass.
F. Lee Bailey, Esq., Boston, Mass.
Edward F. Hennessey, Esq., Boston, Mass.

LUNCHEON

12:30-2:00 Speaker: Charles Lund, M.D., Chairman, Joint Medico-Legal Committee, Mass. Medical Society and Mass. and Boston Bar Associations

2:00-3:30 IX. Psychiatric Consultation to the Criminal Courts—Demonstration of Psychiatric Court Clinic Conference
Donald H. Russell, M.D., Asst. Prof. of Legal Psychiatry, Law-Medicine Research Institute; Director, Court Clinics Program, Mass. Dept. of Mental Health

3:30-4:30 X. Pre-Trial Investigations: Arrest-Search and Seizure—Wire Tapping and Eavesdropping—Confessions—Defense Counsel's Access to Prosecutor's Information and Evidence

Elevated Cholesterol Found In Stroke Victims

Elevated cholesterol levels have been found in persons who have suffered a stroke as a result of hardening of the cerebral arteries, three medical researchers reported.

Albert Heyman, M.D., and E. Harvey Estes Jr., M.D., Duke University Medical Center, Durham, N.C., and M. Dean Nefzger, Ph.D., National Research Council, Washington, D.C., on the basis of their finding, recommended cholesterol-reducing measures for patients with this condition.

Their report is contained in the current Archives of Neurology, published by the A.M.A.

The cholesterol level of 68 men who had suffered this type of stroke was compared with the cholesterol of a comparable group of men with no signs of hardening of the arteries, the authors said. The mean cholesterol level in the stroke victims was "significantly higher" than that observed in the comparison group, they said.

The development of hardening of the arteries is considered by many medical investigators to be associated with elevated cholesterol levels, they said. Although dietary restriction of fat and the administration of cholesterol-reducing agents are commonly advised in patients with hardening of the coronary arteries, they said, these measures are not as routinely prescribed for the patient with hardening of the cerebral arteries.

However, the authors said, the high level of cholesterol found in this series of stroke victims suggests the need for cholesterol-reducing measures in these patients in an attempt to prevent progression of the cerebral vascular disease and recurrent strokes.

OBITUARIES

Roy C. Ferguson, M.D.
1895 - 1961

Dr. Roy C. Ferguson died suddenly at the wheel of his car on August 12, 1961. He was born in Springfield, Massachusetts on April 18, 1895. He graduated from Yale University and Yale Medical School. Dr. Ferguson was a member of the trustees of the Rockville City Hospital, vice president of the medical staff. He was on the staff of the Rockville City Hospital for 38 years. He was past president of the Tolland County Medical Society and was also a director of the Peoples Savings Bank.

The following tribute to Dr. Ferguson was delivered by his pastor, the Reverend Paul J. Bowman: Robert Louis Stevenson once wrote: "There are men and classes of men that stand above the common herd: the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited in the virtues of the race."

One of the most notable in this category is certainly Dr. C. Ferguson. He exemplifies what Mr. Stevenson has written about the physician: "Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing."

We think of the joys and the sorrows Dr. Ferguson shared, the burdens he bore on his heart and conscience for the cause of civic justice and social advance into which he threw himself. He was a man who was self-spending and self-effacing, kindly and courteous, with cultured taste and refreshing humor. He had a sensitive conscience and an outgoing sympathy, was ever ready to listen, slow to judge and yet never judging severely.

We recognize his interest in the home, his love for family and his unique concern and interest in other people. His many years of devotion to his work. His patience and courage during his life was simply inexhaustible. His simplicity was easily understood and his optimism concerning life was contagious. As we pray to God today for faith and guidance and as we mention the many qualities that go to make up a great character we must come back always to the main point that here was a friend, a friend of all. A man highly respected.

Dr. Ferguson has lived his sixty-six years well and his life tells its own story. The friendships he had, demonstrated his influence. I suppose the sweetest words one could ever hear, the most beautiful benediction that could conclude a life, the most coveted epitaph that could grace one's farewell, would be the words spoken by the Master when he said: "Well done good and faithful servant." This was Dr. Ferguson. He lived a useful, devoted, unselfish life, and the world has been made better for his having lived.

We often wish in a childish way that life would never end and so many feel that death is an enemy of life. But it is the knowledge that our years are limited that makes them so precious. Life would be so monotonous and so boring, with no heights or depths, with no crescendoes or minuendoes, with no challenge or achievement. How welcome then the cool peace and embracing rest that comes one day to all of us.

Being a brother Mason he knew the hope of immortality, he knew there was a great architect, by whose mercy we may live again. He knew that a masters wages are paid in coin of the heart, not of the mint. That they are earned by what a Mason does with his mind and not with his hands. The plumb line Roy Ferguson exemplified by his character, his friendliness and his love for mankind.

Gratitude is but a very lame sentiment; thanks when they are expressed, are often more embarrassing than welcome, and yet I am sure that there are hundreds in this community who will acknowledge thanks today and forever to Dr. Roy Ferguson for the comfort and help that he has brought them.

The fact is that he has won his way into our affections. We loved him. And when all is said and done—there isn't anything stronger than love.

And so this is a great loss which means great and lasting sorrow. But because we have known what it is to experience this sorrow we have gained new understanding of the sorrows of others. And these are great gains.

And so our loss if we meet it bravely, means to us as well as to those who go on into the other room, the opportunity for a life larger in its opportunity for service.

"Because you live, though out of sight and reach,
I will, so help me God, live bravely too,
Taking the road with laughter and gay speech,
Alert, intent, to give life all its due."

Elliott H. Metcalf, M.D.

Howard Boyd M.D.
1893 - 1961

Dr. Howard Boyd, age 68, Senior Pediatrician at Manchester Memorial Hospital, died on August 10, 1961 after a long illness.

He was born on May 12, 1893 in Fredonia, Pennsylvania and lived in Meadville, Pennsylvania, where he attended Allegheny College from which he graduated in 1915. He graduated from Harvard Medical School in 1921. After interning at Massachusetts General Hospital and Hartford Hospital, he came to Manchester where he entered general practice in 1924.

Throughout his entire career, Dr. Boyd's main interest was children and the establishment and continued improvement in a department of pediatrics at Manchester Memorial Hospital. He was named chief of pediatrics at Manchester when the department of pediatrics was established as a separate department in 1940. This post he held until 1958, when he was named senior pediatrician at the age of 65.

Dr. Boyd was able to limit his practice to pediatrics in 1945. Prior to that date he dedicated himself to the care of young and old alike. He was elected a Fellow of the American Academy of Pediatrics in 1957, and was president of the Hezekiah Beardsley Society in 1955.

His patients loved and deeply respected him as did his associates. Howard Boyd was an outstanding teacher, not only in the academic aspects of medicine, but in the art and practice of medicine. His standards were high; he expected the same high standards of work from his colleagues.

He had the enviable quality of being able to discard the old and encompass the new thoughts, trends, and modalities of pediatrics. He succeeded in making the best of any situation, but was never content with mediocrity. Besides pediatrics, he had great love for golfing, gardening, and reading. He was well versed in the German language, having taught it earlier in life. His knowledge of the Bible and his ability to quote from it and carry on rather profound discussions was impressive.

The entire community and his many associates in Manchester share the grief of his four daughters and his widow, Janet. His leadership in pediatrics will never be equaled.

Frank H. Horton, M.D.

G. Mansfield Craig, M.D.
1893 - 1961

Dr. G. Mansfield Craig, an obstetrician for nearly 40 years, died at his home after a long illness.

He was born in Middletown, November 22, 1893, son of the late George A. and Lily P. (Mansfield) Craig. A graduate from Wesleyan in the class of 1916, he received his M.D. from Harvard in 1920.

He served his internship at Hartford Hospital, followed by specialty training in obstetrics at Boston Lying-In Hospital. Since 1927 he has served as Senior Attending Physician in Obstetrics at the Middlesex Memorial Hospital until his retirement in 1959.

Dr. Craig was a fellow of the American College of Surgeons, past president of the Medical Board of the Middlesex Memorial Hospital, attending physician at the Connecticut State Hospital, past chairman of the Section on Obstetrics and Gynecology of the Connecticut State Medical Society and a member of the New England Obstetrical Society.

The host of patients and colleagues and other friends who knew "Mike" Craig will remember his kindness and delightful sense of humor. He was a rare companion and a sensitive friend. Those who worked with him will not forget his unswerving integrity; he never shrank from adverse criticism or from taking an unpopular position when a matter of principle was at stake. The Obstetrical Service of the Middlesex Memorial Hospital is a monument to this fine, courageous and devoted physician whose memory will remain an inspiration to those who seek to attain to the highest ideals of medicine.

C. B. Crampton, M.D.

Franklin S. DuBois, M.D.
1906 - 1961

Dr. Franklin S. DuBois, Associate Medical Director of the Silver Hill Foundation, New Canaan, died June 24th at the Harkness Pavilion of the Columbia-Presbyterian Medical Center in New York City. He was 55 years old.

Dr. DuBois was born in Liberty, Indiana on January 26, 1906, the son of Mr. and Mrs. Smith DuBois. Following graduation from Wabash College, where he was a member of Kappa Sigma Fraternity and was elected to Phi Beta Kappa, he entered the Rush Medical College of the University of Chicago. In medical school he repeated his academic record in college, graduated with honors and membership in Alpha Omega Alpha Honor Medical Society. He received his M.D. degree in 1931.

Prior to specializing in neurology and psychiatry and joining the medical staff of Silver Hill in 1937, Dr. DuBois was Professor of Anatomy and Chairman of the Department of Anatomy at the University of Alabama. He was a Diplomate of the American Board of Psychiatry and Neurology, a Fellow of the American Medical Association, and a member of the American Neurological Association. He was an Associate Attending Neurologist of the Vanderbilt Clinic of the Columbia Presbyterian Medical Center in New York City, Consultant to the Department of Psychiatry, Greenwich Hospital, Greenwich, Connecticut and Consultant to the Department of Psychiatry and Neurology of the Norwalk Hospital in Norwalk, Connecticut.

For many years Dr. DuBois was active in the development of Connecticut's mental health program, was a member and past chairman of the Committee on Mental Health of the Connecticut State Medical Society, and at the time of his death was Chairman of the Board of Mental Health of the State of Connecticut. He was the author of many articles in the fields of neurology and psychiatry. Among his many professional interests was that of the problems of emotional adjustment in childhood and adolescence and some of his papers dealing with these stages of development of the individual have been widely used for reference by parents, schools, and mental health groups.

In his community Dr. DuBois gave generously of himself. He had served on the Board of Trustees of the Country School and was a member of the Vestry of St. Mark's Episcopal Church.

Dr. DuBois is survived by his wife, Maurine Tompkins DuBois, his two sons, Arthur L. and Franklin S. Jr., and his parents, and a sister, Miss Charlotte DuBois of Austin, Texas, and two grandchildren.

William B. Terhune, M.D.

William Haviland Morriss, M.D.
1886 - 1961

Dr. William Haviland Morriss, former Medical Director and Superintendent of the Gaylord Hospital and Sanatorium in Wallingford, and a leading medical authority in the treatment of tuberculosis, died August 10, after a long illness. He was 75 years old.

A native of Baltimore, Maryland, and a graduate of Johns Hopkins University School of Medicine in 1912, Phi Beta Kappa, he interned at Johns Hopkins Hospital and was resident physician at the Hospital for Women in Baltimore from 1913 to 1915. Dr. Morriss served with the American Red Cross in Belgium in 1915. He taught gynecology and obstetrics at Yale University from 1915-1917.

He entered the United States Medical Corps a lieutenant and headed the Yale Mobile Hospital unit overseas from 1917-1919. He was discharged from the American Expeditionary Force October 20, 1920, a captain.

Dr. Morriss came to the Gaylord Hospital and Sanatorium as associate medical superintendent in 1921. A close friend and associate of the late Dr. David Russell Lyman, Gaylord's superintendent, Dr. Morriss wrote many research papers on the cause and treatment of tuberculosis.

Dr. Morriss was a director and past vice president of the National Tuberculosis Association. He was also a founding director and first president of the Connecticut Trudeau Society, and a president of the Connecticut Tuberculosis Association. He was a fellow of the American College of Physicians, a member of the American Clinical and Climatological Association and the American Medical Association, and a diplomate of the American Board of Internal Medicine.

In 1951, Dr. Morriss was the first recipient of the David Russell Lyman Gold Medal Award given in recognition of his contributions to the knowledge of tuberculosis and its treatment and for his distinguished record of service in the field of public health education.

Dr. Morriss is survived by his wife, the former Marian Norcross of Highland Park, Ill, and two daughters, Miss Elizabeth Norcross Morriss and Mrs. Marian Morriss Russel of Apalachin, N.Y., and a grandson, William Lyman Russell.

Dr. Sterling B. Brinkley, Director of the Gaylord Hospital and Sanatorium, expressed his personal distress and the deep sorrow of Gaylord's Directors, its staff and the many people to whom he was their trusted physician. "Dr. Morriss," he said "was an internationally known authority on tuberculosis and was a major force in making Gaylord Hospital the vital institution it is today.

Howard J. Crockett.

In Memoriam

Moore, Frank H.—Bethel; Missouri Medical School, 1898; a resident of Bethel for 60 years, Dr. Moore was a veteran of World War I, having served in the U. S. Army Medical Corps; he served as director of health for Bethel for more than 40 years and also served the community as medical examiner; he served on the Bethel Board of Education and the Board of Directors of the Bethel Visiting Nurse Association; died at Danbury Hospital August 26 after an illness of several months, at the age of 87 years.

Murdock, Charles L.—New York Medical College, 1948; a determined struggle for a medical education against great odds finally brought Dr. Murdock a license to practice medicine at 46 years of age; despite the handicap, he established a succesful practice in Easton in 1949; his medical studies were interrupted in 1923, when his father was injured; he spent the next 19 years in insurance, the building trades, the lumber business and gasoline station operations; in 1942 he returned to Wesleyan University, completed his pre-medical course and entered New York Medical College in 1944; graduated in 1948, he interned at Bridgeport Hospital and started his medical practice in 1949; died at Bridgeport Hospital August 17 following a heart attack, at the age of 57 years.

Pomeroy, Nelson A.—Waterbury; Columbia University College of Physicians and Surgeons, 1896; Waterbury's oldest physician, Dr. Pomeroy devoted more than 40 years to medical service in that community; when he first came to Waterbury in 1899, 65 physicians were practicing there and he is the sole survivor of that group; Dr. Pomeroy was appointed to the medical staff at Waterbury Hospital in 1902 and was named one of the first members of the staff at St. Mary's Hospital in 1908 as vice-president and visiting surgeon; he was named a member of the Board of Health in 1929 and served 15 years in that capacity; died at Waterbury Hospital September 4, following a long illness at the age of 93 years.

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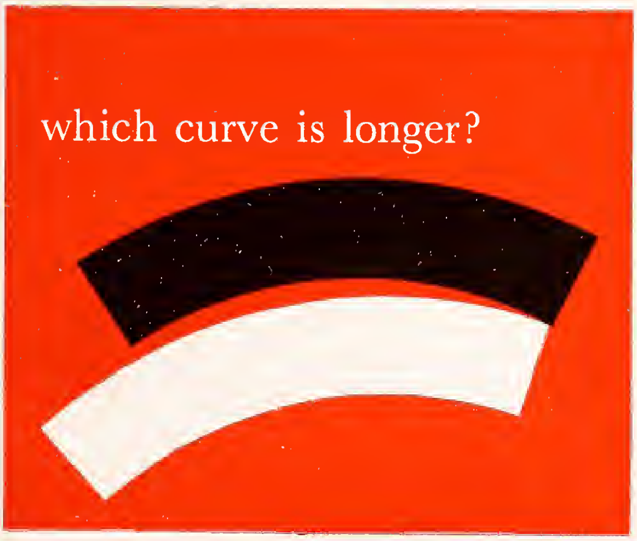
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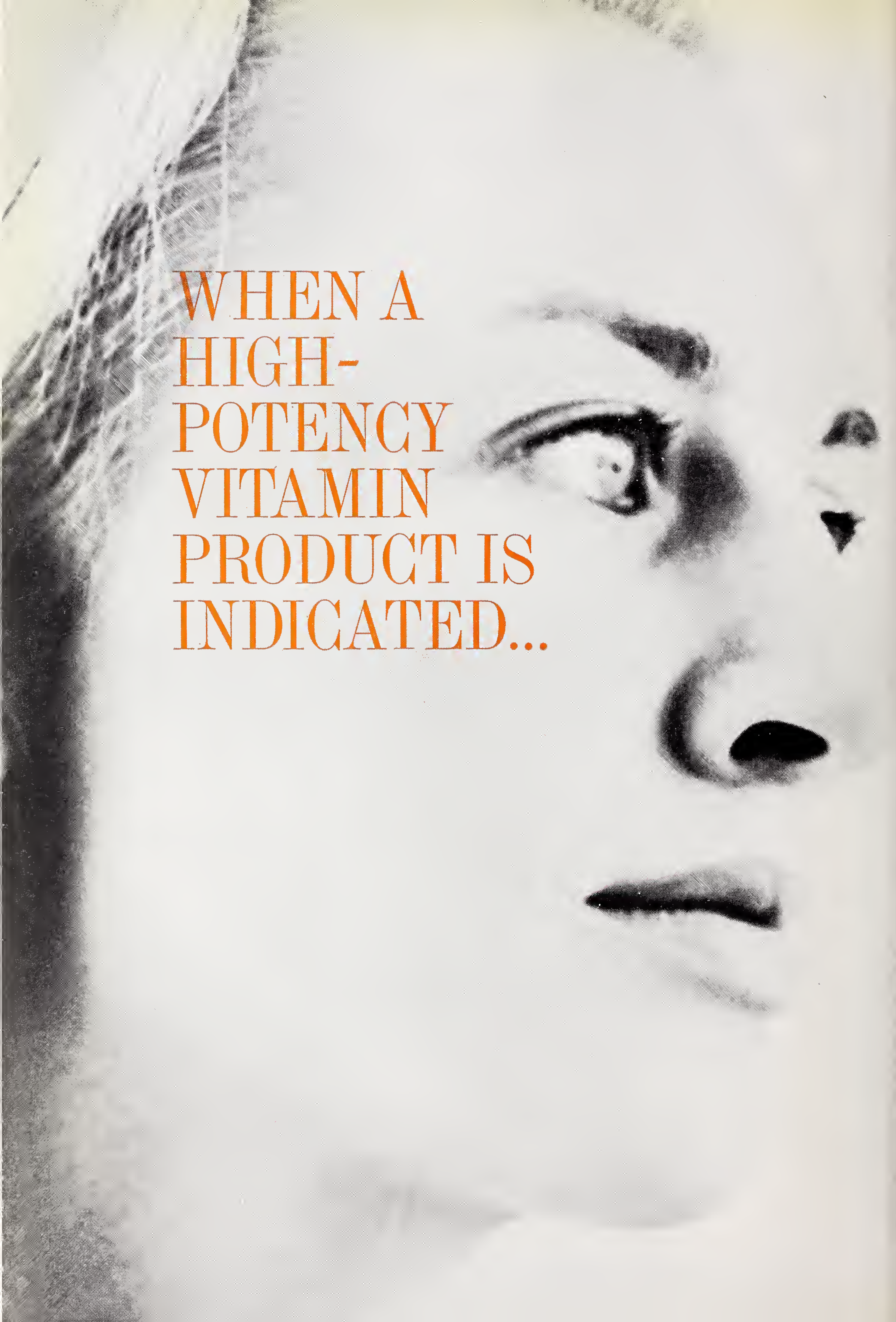

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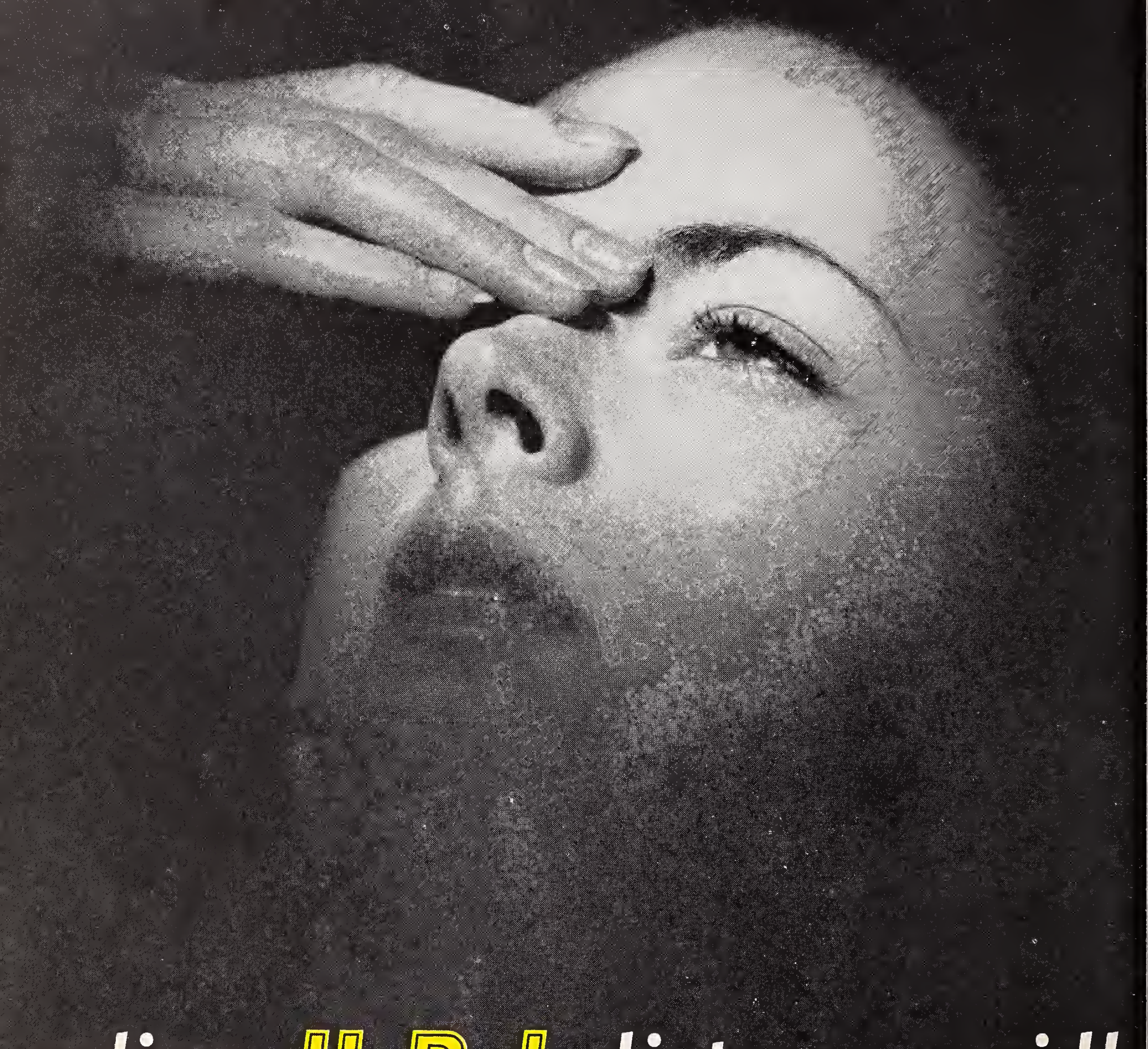

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CONNECTICUT MEDICINE

Vol. XXV NOVEMBER, 1961 No. 11

Foreword

By

Abraham Ribicoff
Secretary of Health, Education, and Welfare

In a sense, I am going back to Connecticut when I write this. When Dr. Howard A. Rusk invited me to contribute to this special issue of Connecticut Medicine, I welcomed the chance to talk again to my many friends in the practice of medicine in Connecticut. The transition from national to state interests is easy, particularly when we deal with disability and rehabilitation, for I have learned that disability among the people of our fifty states is largely a multiplication of the problem as you and I know it in Connecticut.

As Governor, I shared many of these problems and responsibilities with the doctors of Connecticut and we accomplished a great deal.

Yet we know that there remain around us large numbers of disabled people living lives of futility, many of whom could be restored to active, useful and satisfying lives. Certainly this is the goal we seek for all our people.

In our lifetimes, we have seen preventive and curative medicine advance on a scale so vast it is difficult to fully comprehend. The Public Health Service and the state and local health departments, working with practicing physicians and local officials, have greatly altered the picture of most communicable diseases in this country during the last half-century. Medical research has moved from the background to the forefront of the entire medical and health effort.

We cannot count statistically the lives saved, yet we know that they total in the millions, just as we know that the average life span for our people has increased from about 49 years at the turn of this century to nearly 70 years in 1961.

Now we are in the beginning stages of a similar conquest of disability. Again we look to the physician. If we are to make real gains in this conquest, we must recognize modern rehabilitation as a key part of any major effort to cope with disability and rehabilitation must begin at once.

The latter point—beginning immediately—lies at the root of so many of the problems we see today in disability—the problems seen by Dr. Howard A. Rusk and his colleagues, those faced by our state vocational rehabilitation agencies, and those which I and other public officials must contend with. This gap, this loss of months and years before a rehabilitation program is begun, is a catastrophe for the disabled person, a major problem for the professional rehabilitation staffs who work with the disabled, and a heavy expense upon public agencies and the taxpayers who provide public funds.

Several years ago a study was made of all the disabled workmen's compensation beneficiaries who had been rehabilitated through the federal-state program of vocational rehabilitation during one year. The study revealed that, for this group of 4,430 people, the average time elapsed between injury and referral to the rehabilitation agencies had been *seven years.* These were disabled people *who had been rehabilitated*—but seven years had been lost before the rehabilitation process was begun. We believe this situation among injured workmen's compensation beneficiaries has improved somewhat since then, but the delays are still formidable.

President Kennedy, in his Health Message to the Congress on February 9, 1961, stated clearly his intention to support the expansion of the vocational rehabilitation program. Funds were included in the appropriation request for next year to do this, and to further develop the research and professional training grant programs in rehabilitation. The vocational rehabilitation program, one of the outstanding examples of successful cooperation between the states and the federal government, has had bi-partisan support for many years and it is our intention to see that it grows substantially and soundly. Last year, more than 88,000 disabled persons were rehabilitated and restored to useful work through this program. This is a tremendous contribution to our whole society, for humanitarian, economic and social reasons. Yet we know that many more should be rehabilitated annually just to keep up with new cases arising each year who need service.

Leaders in this field, such as Dr. Rusk, provide professional and technical guidance, and the example set by his widely known Institute. Excellent hospitals, rehabilitation centers, clinics and other facilities for this work are in operation in Connecticut, although more are needed, and the state is blessed with some of the finest doctors in the world. The opportunity is there, as it is in most other parts of the country, if we are willing to expand upon this established base to a point where disabled people can get the services they need when they need them.

Until this happens, in Connecticut and in every other state, we will continue to be faced with several million American citizens needlessly sidelined by neglected disability. As a matter of man's humanity to man, we cannot rationalize it. As a matter of public policy, we cannot condone it.

I hope we will see the day when every practitioner of medicine affirmatively seeks to remedy disability among his patients. When that day arrives, we will see the beginning of the end of neglected disability among our people.

The Philosophy Of Rehabilitation

Howard A. Rusk, m.d.,
New York.

The Author. *Professor and Chairman, Department of Physical Medicine and Rehabilitation, New York University College of Medicine.*

One of the greatest advances that has been made by medicine and surgery in the past two decades is the new acceptance of a third dimension of medical and surgical responsibility—rehabilitation.

Rehabilitation has frequently been termed the "third phase of medicine," following "preventive medicine" and "curative medicine and surgery."

It is that period when the "fever is down and the stitches are out," the period "between the bed and the job." In contrast to "convalescence," in which the patient is left alone to let nature and time take their course, rehabilitation is a dynamic concept in which the skills of the rehabilitation team consisting of physician, physical therapist, occupational therapists, nurses, social workers, counselors and other trained personnel are integrated as a single force to assist the patient in reaching the maximum of his physical, emotional, social and vocational potentials.

The first objective of rehabilitation is to eliminate the physical disability if that is possible; the second, to reduce or alleviate the disability to the greatest extent possible; and the third, to retrain the person with a residual physical disability "to live and to work within the limits of his disability but to the hilt of his capabilities."

Until the last fifty years, the saving of human life as the traditional and cherised goal of medicine was largely a matter of saving individual patients. With the first half of the Twentieth Century, the whole character of medicine's traditional goal was changed.

The expansion of research into the etiology and therapy of communicable and infectious diseases "struck specifics," the establishment of new and effective public health measures and the rich findings in the basic fields reported elsewhere in this publication gave the life-saving functions of medicine mass proportions.

These combined with similar advances in greater availability of medical and hospital care, improved nutrition, increased education, better housing and all the contributing factors to our unprecedented current standard of living mean hundreds of thousands of persons are alive today who would have died at the turn of the century with the same medical problems. Yet many of them have not come out unscathed. They have survived only to find themselves confronted with residual disability. The paraplegia whose back is broken in a fall does not die today as he would have fifty years ago. He has strong arms, and active mind, and a burning desire to live the best life he can with what he has left. Antibiotics control the upper respiratory and urinary infections of the severely involved cerebral palsied youngster who would have succumbed before their development. He seeks his place in society. The survivors of infection get their share of the degenerative diseases. These are present-day problems which must be solved.

The day-to-day experience of all practicing physicians shows that not only has there been a substantial increase in the gross number of disabled persons, but that a growing percentage of our population suffer from long-term illnesses and substantial physical impairments.

The rapid growth of rehabilitation services for the handicapped is a part of a total pattern of an expanding community, natural and global consciousness of social welfare, which is reflected in similar advances in all education, health, and social services.

As in all great social movements, this increased interest in rehabilitation has been a result of the impact and recognition of increased needs—in this instance, the rapid increase in the incidence of chronic disability as a result of the increasing age of the population.

Rehabilitation has been defined as the ultimate restoration of the disabled person of his maximum capacity—physical, emotional, social and vocational. Implicit in this definition is the need for a team whose members can bring together a wide variety of skills and understandings. No one profession can furnish all the services needed. Rehabilitation is rather, an area of specialized activity within a number of professional disciplines.

The Physician's Responsibility

Until recent years, the great majority of the medical profession looked upon rehabilitation as an extra-curricular activity of medicine, something dealing with social work and vocational training, but something which had little concern, and which held but few implications for medicine. Today, however, that trend is being reversed, and although there are still many physicians who are unfamiliar with the aims and procedures of rehabilitation, more and more medicine is beginning to recognize that medical care cannot be considered complete until the patient with a residual physical disability has been trained "to live and work with what he has left." Except in a few isolated instances, the physically handicapped person must be retrained to walk and travel, to care for his daily needs, to use normal methods of transporation, to use ordinary toilet facilities, to apply and remove his own prosthetic devices and to communicate either orally or in writing. These are such simple things that they are frequently overlooked, but the personal, vocational, and social success of the handicapped person is dependent upon them.

The practice of rehabilitation for the general practitioner, the orthopedic surgeon, or for any doctor, begins with the belief in the basic philosophy that the doctor's responsibility does not end when the acute illness is ended or surgery completed; it ends only when the individual is retrained to live and work with what is left. This basic concept of the dotcor's responsibility can be achieved only if rehabilitation is considered an integral part of medical services. Any program of rehabilitation is only as sound as the basic medical and surgical service of which it is a part. The diagnoses and prognosis must be accurate, for it is upon them that the feasibility of retraining is determined.

Rehabilitation Services In Hospitals

Although some outstanding rehabilitation programs in various parts of the world have demonstrated that rehabilitation to the point of self-care and even to full or limited employment is possible for many of the chronically ill who have been hospitalized for long periods, patients in few hospitals receive comprehensive rehabilitation service. Hospitals complain that the chronically ill are responsible for their over-crowding, but few of them provide the third phase of medical care which will permit many of these patients to leave the hospital.

It is only within the general hospital that such services can be brought to the patient at the earliest possible time, and costly and damaging physical, emotional, social and vocational sequelae of the acute disease process or trauma be alleviate or minimized.

To ignore the development of rehabilitation services within general hospitals is to guarantee the continued deterioration of many less severely disabled persons until they, too, reach the severely disabled and totally dependent category. The neglect of disability is far more costly than an early aggressive program of rehabilitation which restores the individual to the highest possible level of physical, economic, social and emotional self-sufficiency.

Nearly 14 years of experience in the first comprehensive rehabilitation in a general civilian hospital (Bellevue Hospital, New York City) together with extended observation and study of other general hospitals indicate that rehabilitation services within the hospital can best be provided by the organization of a "bed service" which has a relationship to the other hospital services similar to that of the X-ray and laboratory divisions.

For example, in Bellevue Hospital the rehabilitation service provides consultants for each other major services or orthopedics, pediatrics, surgery, and neurology. Its resident and visiting staff regularly makes rounds with the resident and visiting staff of these services. Its staff may, for example, see a patient in consultation before his leg is removed, indoctrinating him as to what he must expect, why he cannot keep his stump on a pillow, why he has to lie on his abdomen. Medical responsibility during the period of definitive care, of course, rests with the initial or admitting service. As soon as the stitches are removed, the patient is transferred to a rehabilitation ward. At this time, the rehabilitation service assumes the major responsibility for his care, fitting of the prostheses, and training in its uses. The roles are now reversed; the surgical service has become the consulting service.

Prior to the actual transfer of the patient to a rehabilitation ward, however, he attends one of the rehabilitation service's semi-weekly evaluation clinics, where his problem is analyzed and discussed by all members of the staff-physical therapists, occupational therapists, nurses, vocational counselors, speech therapists, social workers and psychologists —as well as resident and visiting medical staff.

The decision as to the feasibility of transferring the patient to the rehabilitation service is then made on the basis of that service's ability to contribute to his over-all physical, emotional, social and vocational rehabilitation.

If a community is served by several small general hospitals and each has no comprehensive rehabilitation service, then really disabled patients must be cared for in a community rehabilitation center, which provides facilities not only for out-patients but also for in-patients. Such a community rehabilitation center acts as a "service center" for the entire community.

Rehabilitation during the first quarter of the century was characterized by the development of orthopedic surgery, physical therapy, and occupational therapy, all outgrowths of World War I. Under the stimulus of World War II, the second quarter of the century has seen a recognition that the problems medicine faces in meeting the growing incidence of chronic disease and disability extend far beyond any medical specialty; they are problems which must be faced and solved by medicine as a whole. The concept of rehabilitation and the basic technics must be made a part of the armamentarium of all physicians, for regardless of the type of disability, the responsibility of the physician to his patient cannot end when the acute injury or illness has been cared for. Medical care is not complete until the patient has been trained to live and to work with what he has left.

If any major attack is to be made on the problems of chronic disability, the general hospital and the individual practicing physician must be the focal points of the attack. It is only in doctors' offices and in general hospitals that such services can be brought to the patient at the earliest possible time and that the costly and damaging physical, emotional, social and vocational sequelae of the acute disease process or trauma may be alleviated or minimized.

Rehabilitation of the chronically ill and the chronically disabled is not just a series of restorative techniques—it is a philosophy of medical responsibilty. Failure to assume this responsibility means to guarantee the continued deterioration of many less severely disabled persons until they, too, reach the severely disabled and totally dependent category. The neglect of disability in its early stages is far more costly than an early aggressive program of rehabilitation which restores the individual to the highest possible level of physical, economic, social and emotional self-sufficiency.

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Rehabilitation Techniques For The Hemiplegic Patient

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This article will not concern itself with the medical management of patients with cardiovascular disease. Every physician has his own routine, and there are many variations such as the question as to whether or not to use anti-coagulant therapy. Many articles are available on this important phase of treating the patient.

The purpose of this paper is to outline those rehabilitation procedures which should begin early and which will help prevent contractures and atrophy of muscles which occur so quickly with these patients.

Of utmost importance is proper positioning of the paralyzed extremites, as this will save weeks and even months of physical therapy. Small pillows should be utilized to keep the paralyzed arm away from the chest. The arm must be positioned properly to prevent contracture of the shoulder (holding the arm close to the chest and the inward rotation that always occurs in these cases). A sufficient number of pillows should be used to keep the arm well away from the chest so that each joint is positioned higher than the preceding one—elbow joint higher than the shoulder, wrist joint higher than the elbow—with the fingers positioned higher. A small roll of bandage with padding may be used to keep the thumb away from the hand and the fingers barely flexed. This positioning of the upper extremity helps to prevent the edema of the hand so often seen.

Attention must also be paid to careful positioning of the affected lower extremity. Unless it is positioned properly, the leg falls into outward rotation with a toe drop. Sand bags should be placed at the thigh and below the knees on the lateral aspect of the leg in order to keep the lower extremity in a neutral position. Additional sand bags may be used to keep the foot at a right angle to the leg to prevent toe drop caused by shortening of the gastrocnemius muscle. A foot board can be utilized to keep the foot at a ninety degree angle, but the sand bag is usually easier to procure and is probably more satisfactory. If the aforementioned procedures are followed, the patient will now be in an ideal position to prevent complications.

The clinician must decide when the patient's condition will permit a more active program. Experience has shown that patients with a hemiplegia caused by a cerebral hemorrhage can usually begin a more active program within five to six days after the acute onset; patients with a thrombosis or an embolism can be started within two or three days. It must be remembered, however, that only the physician in charge of the patient can give the "go-ahead signal" for a more active program.

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A registered physical therapist should be utilized because they have had the necessary training and experience in the treatment of this type of patient. However, a nurse or a member of the family can be instructed to carry out the rather simple exercises which are necessary to maintain the muscle tone, prevent contracture and help increase the strength of weakened muscles. A very detailed prescription of the exercises and stretching desired should be written by the physician in charge.

The therapist should start by taking the paralyzed extremities through a complete range of motion of each joint, usually starting with the upper extremity. The shoulder is taken through a complete pattern of range of motion which includes flexion of the shoulder, abduction and adduction, internal and external rotation. The shoulder should then be taken through a complete circumduction. The arm is brought to the side and the elbow is then flexed and extended. Next, the lower part of the arm is placed in supination and then taken through to pronation and return. The hand is flexed at the wrist joint, then extended and brought back to neutral position and then moved medially and again laterally. The joints of the fingers must be taken through all ranges of motion. All of these exercises involving passive motion are performed by the therapist.

Next, the lower extremity. Starting at the hip joint, the leg is taken from adduction to abduction, the leg flexed at the hip joint, and brought back to extension. The leg should be taken through internal and external outward rotation. The leg is raised and the knee joint flexed and the leg brought back to extension. The ankle joint is then taken through all of its motions, paying particular attention to the dorsiflexion of the foot. The heel cord should be stretched. This is accomplished by cupping the patient's heel in the therapist's hand; she then places her forearm against the ball of the foot, exerting sufficient pressure to stretch the heel cord and bring the foot up to at least a ninety degree angle and past, if possible. The above-mentioned exercises should be carried out once in the morning and once in the afternoon.

The program should be increased as the patient improves and he should be encouraged to assist in his exercises. As the patient becomes more alert and his muscle power returns, he must be urged to utilize more and more of his own muscle power.

The physician must decide how soon the patient can be allowed to sit up. Patients in the older age group lose their sense of sitting and standing balance very quickly unless they are brought to a sitting position as soon as possible. After receiving clearance from the physician, the therapist will assist the patient to sit—first with his feet still in bed, and later by hanging his legs over the edge of the bed. At this point it must be remembered that it is important to have the patient in a low bed rather than a high one. He can then be taught sitting balance with his good arm extended, his hand flat on the bed and his feet firmly on the floor, widely spaced apart. The therapist should stand close to his affected side. The patient can be allowed to sit for five or ten minutes at first, gradually increasing his sitting time as his tolerance permits. Sitting exercises should also be done twice daily, in the morning and in the afternoon. If the sitting exercises are carried out properly, the patient should increase his sitting time rapidly. It must be pointed out, however, that the patient will do better sitting on the edge of the bed rather than in an over-stuffed chair where he can lean back and take it easy.

The patient may be allowed to attempt standing upon orders from the physician. Plain, ordinary ladder back kitchen chairs are quite adequate for this. Two chairs are placed at the bedside with the backs toward each other, and the patient sitting in bed between the two chairs. If his hand is completely paralyzed, it will be necessary to bandage it lightly to the top of the back of the chair nearest that side. The unaffected hand grasps the back of the other chair. The therapist should stand in front of the patient, making sure his feet are spaced widely apart. To prevent the affected knee from buckling, the therapist must exert pressure against it. The patient is encouraged to maintain standing balance with the therapist standing in front of him. Standing time may be very short to begin with, but can be increased rapidly until it is felt that it is safe for the patient to stand alone, but always in the presence of a therapist.

At this point a manual muscle test should be done of the patient's upper and lower extremities in order to determine what type of braces are required. If the quadriceps muscle is weak or absent, it will be necessary to order a long leg brace. The prescription should be for a double bar long leg brace with box lock at the knee joint on the medial bar with a stirrup attachment and a ninety-dergee stop at the ankle joint. Patients who have a strong quadriceps muscle but weak or absent musculature below the knee should have a short leg brace. The prescription for this is a double bar short leg brace with a stirrup attachment at the ankle joint and a ninety-degree stop. The weakened or absent muscles below the knee usuaally result in toe drop and inversion of the foot.

When the brace has been delivered it is time for the patient to walk, and the ladder back kitchen chairs can be utilized for this also. The patient should be taught to walk in a reciprocal manner. The therapist should at all times stand beside the patient on his affected side. If, for example, the patient has a right-sided hemiplegia, the therapist stands beside the chair on the right, advances the chair approximately one foot and asks the patient to bring his left leg through. The patient should then be able to advance the left chair with his unaffected left hand and at the same time take a step with his right leg. Thus, as the left leg swings forward, the right arm swings forward, which is the normal walking pattern. If parallel bars are available, they can be utilized but as mentioned before, the kitchen chairs will do just as well.

If the above procedures are carried out properly, the patient should progress to walking with a cane on a level surface, with assistance. The patient must also be taught to climb steps and curbs.

The physician's prescription should also include muscle re-education for all muscles in the affected extremities which are of fair grade or less, and resistive exercises for all muscles of fair plus and above.

For those patients who do not recover completely, and the majority of these patients do not, it will be necessary to teach them the "activities of daily living". Many patients with a completely paralyzed upper extremity have been taught to dress themselves, feed themselves, take care of their personal hygiene, walk and become completely self-sufficient. Of course, the amount of instruction necessarily depends upon the amount of residual paralysis.

Those patients who have a speech disturbance can best be handled by a competent speech therapist. A book suitable for this purpose is "Aphasia Rehabilitation: Manual and Work Book", published by the Saxon Press, 207 East 37th Street, New York 16, New York.

It must be remembered that there is a natural depression which follows a "stroke". In the early days there is a tendency to laugh or cry at the slightest provocation. Therefore, it is important that these patients be made to feel loved and wanted. The patient and his family must be made to understand that the patient himself is the most important member of the rehabilitation team. What the patient learns to do for himself is the most important part of his therapeutic program.

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The value of a commodity can be estimated pretty accurately, while it is humanly impossible to estimate the value of a medical service in dollars and cents. Advice given by a doctor in a half hour's conference may have tremendous repercussions in a man's life, while a major operation may be entirely worthless.

H. E. Sigerist, On Sociology of Medicine.

Rehabilitation Of Neurologic Patients

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THE patient with a neurological disease is a commonly encountered and serious problem in general medical practice. Despite encouraging advances in definitive therapy, for certain neurological disorders, there frequently are residual disabilities which cannot be overcome by medical or physical modalities. An accurate appraisal of the nature, course and extent of the underlying pathological process, as well as a detailed evaluation of the extent of the patient's disability, is essential if therapy is to be prescribed and a comprehensive rehabilitation regimen considered.

The rehabilitation program itself is planned to offer the patient the opportunity of his ultimately functioning at his maximal potential. This requires an appreciation and utilization of the appropriate rehabilitation techniques, e.g., the employment of specific exercise procedures as indicated, the use of functionally designed prosthetic devices as required, an intelligent exploration of the various self help devices currently available, as well as a careful program of vocational exploration.

Each patient's program must be a highly individualized one. Nevertheless the overall goals should be completely realistic to both the patient and physician if the program is to be successful. Although the primary goal is usually self-sufficiency, in most instances an attempt should be made to increase the patient's functional capacities to the point where vocational exploration is warranted.

A carefully planned rehabilitation program, faithfully executed and carefully followed, frequently proves to be of significant value in decreasing the extent of the patient's disability and handicap. It's motivating capacities and the psychological benefits too, are extremely important aspects.

Facial Paralysis (*Bell's Palsy*) Although most commonly of unknown etiology it must be borne in mind that occasionally facial paralysis is the result of a mass lesion, i.e., tumor, abscess, cyst, etc. Each patient's systemic medical and neurological status must be carefully and comprehensively reviewed if some of the rarer causes are not to be overlooked. Fortunately in most instances the process is a relatively benign one and the majority of patients exhibit a marked degree of spontaneous improvement within six weeks after the onset of paralysis.

The initial treatment is primarily symptomatic and included the local application of warmth to the involved muscles. Attention to eye hygiene is essential; protective glasses or a patch and the daily use of mild, antiseptic eye washes are recommended. Gentle massage of the face several times daily in front of a mirror is prescribed. The patient is instructed in the technique of perioral and periorbital massage. The massage should begin at the medial and inferior margins, gradually stroking upward with a circular motion in the direction of the muscle fibers. Attempts at volitional movement should be attempted and practiced regularly with the aid of a mirror. The therapeutic use of electrical stimulation is controversial and is usually not recommended beyond the acute stage. It is usually considered to be of little value when violitional movement has returned. Facial splints and supports of many types have been designed to prevent stretching and contractures; a simple one extends over the ear on the affected side and hooks into the angle of the mouth. Vitamin and steriod therapy are commnoly used as adjuvant medical therapy to the above, but their value is uncertain.

If there is no improvement within two weeks after the onset of the paralysis, electrodiagnostic studies including reaction of degeneration, chronaxie and electromyographic studies may prove invaluable in prognosticating recovery or the lack of it.

With recovery there frequently will be transient synkinetic movement of the platysma or other facial musculature that may distress the patient. Mild sedation and reassurance is commonly all that is required in managing the patient as this condition is often a transcient phenomenon.

Parkinsonism Although of diverse etiology, Parkinsonism is usually a progressive disorder. A therapeutic rehabilitation program is directed at amelioration and alleviation of the symptoms of rigidity and tremor and its concomitant resultant functional disabilities. In combination with a well-regulated and periodically reviewed program of drug therapy, an activity program is frequently of limited but of significant value. The patient is encouraged to keep as physically active as his general medical condition will permit. In the early stages gait training is recommended. The patient is encouraged to walk with a broader base; his feet are held further apart, and he is instructed to deliberately lift his feet in walking. Attention is called to the reciprocal pattern of armswing and with volitional and deliberate armswinging, the gait pattern can be made to resemble a more normal one. Because of the generalized rigidity and loss of associated movements, there is often a great difficulty in arising from a sitting position. The patient is, therefore, instructed not to sit in low or soft, upholstered chairs but rather to choose firm backed chairs. He will find it easier to arise from the sitting position if he first shifts his feet slightly backward beneath the chair or to each side and backward before he leans forward to stand up. A program of general conditioning is often of value. Massage and passive motion of the rigid musculature often proves helpful. Warm baths and pool therapy are frequently excellent aids in relaxation. Occupational therapy is valuable both for its motivating and exercise activities. The tendency for most patients with Parkinsonism to withdraw from social situations, and the psychological problems associated with social inadequacies must be guarded against. In some cases supportive psychotherapy may be of value. When the patient becomes more inactive an attempt should be made to improve his proficiency in the Activities of Daily Living, and in very severe cases, the program may be designed to teach the family more efficient nursing procedures.

The development of many of the newer neurosurgical procedures directed at amelioration of the symptoms of Parkinsonism have evoked a great deal of interest and hope. Although it is premature to judge its ultimate role in treatment of these cases, the results appear encouraging for carefully selected patients. The rehabilitation potential of these patients who have had surgery performed must be explored after the operation if maximal benefit is to be obtained from the procedure.

Brain-Stem and Cerebellar Disorders. There are a number of neurological entities resulting from the focalization of pathology within the brainstem. Commonly the disability encountered is not primarily one of weakness, but rather the result of ataxia and incoordination as the result of involvement of the cerebellar system. The treatment of such cases is a protracted but not hopeless one. Attempts are made to strengthen any weak muscles by a gradual program of muscle reeducation exercises, and then a series of coordination exercises appropriate for the involved muscles are prescribed. Intensive gait training is frequently necessary. Commonly this will be initiated in the parallel bars and then as the patient shows progress, he is allowed to walk with canes or crutches as necessary. A more broad based gait is deliberately cultivated in many instances. Improvement is commonly painfully slow. Often it is incomplete. With patience and intensive training in Activities of Daily Living, many of these patients can be made at least self-sufficient. In occasional instances there is such a degree of truncal ataxia that the patient is unable to walk and it may be necessary for him to rely upon and be trained in the proper use of the wheelchair. A trial of speech therapy too, is usually recommended for the dysarthria commonly encountered.

Degenerative Disorders. There is a wide spectrum of neurological disease which chronically and often insidiously, involve the anterior horn cells and the pyramidal tracts in varying degrees. These include on one hand syndromes in which there is almost exclusive involvement of the anteroir horn cells, e.g., *primary spinal muscular atrophy,* and on the other, conditions in which the signs of involvement are only of the pyramidal tract, i.e., *primary lateral sclerosis.* It is more common however, to find admixture of both entities as in the more fulminating syndrome of *amyotrophic lateral sclerosis.*

The rehabilitation management of each entity is directed toward the underlying disability. Muscle reeducation and progressive resistance exercises are frequently of value when there is some superimposed atrophy of disuse onto that as the result of the primary anterior horn cell involvment. The primary pathological process however is not influenced by exercises. In many instances it becomes necessary to fully exploit the patient's Activities of Daily Living potential using a battery of self-help devices to substitute for the motor weakness.

With primary pyramidal tract involvement the treatment is directed at an attempt at alleviation of the spasticity, and gait abnormality. The patient is coached to walk with a broader base and voluntarily resist any scissoring tendency. Exercises to strengthen any weak musculature is recommended. Relaxation exercises are of value for some but require prolonged practice. Stretching the involved extremities, except for the prevention or correction of contractures, is of limited value. The use of the warm water pool or tank as a muscle relaxant can be tried. Proper bracing is indicated in selected relatively stationary cases and in occasional cases, obturator neurectomy or block has been beneficial.

Because of the rapidly progressing nature of amyotrophic lateral sclerosis, an intensive rehabilitation regimen is rarely indicated. Treatment is usually palliative in an attempt to prevent further complications. Passive exercise to prevent joint contractures and the daily use of the tilt board may be warranted. Often the greatest benefit will be obtained from training the family or nurse in the most efficient way of assisting the patient in carrying out his Activities of Daily Living as long as he possibly can.

Demyelinizing Diseases

Multiple Sclerosis. Since multiple sclerosis is extremely variable in its course and symptomatology, each program must rather be a highly individualized one depending on the patient's medical status, needs, and problems. The physician's goals must be based on a realistic appraisal of the patient's medical course. When the disease appears to be relatively stationary or retrogressive a dynamic rehabilitation program is indicated; however, if the disease appears to be rapidly progressive, a careful appraisal must be made as to whether the immediate goals are realistic to warrant expenditures of the required time, effort and money. In view of the frequency of exacerbations and remissions, regular and frequent re-evaluations of the patient's status and the treatment are essential.

Various medical opinions exist as to the value of an exercise program for the multiple sclerotic patient. Many physicians feel that it is contraindicated, and some even advocate complete bedrest. Others, however, feel that such physical limitation does not positively influence the course of the illness but rather has a harmful effect in that the patient so treated appears to have a higher incidence of secondary complications. There is no evidence that the rehabilitation regimen, with normal use of physical medicine modalities and aids, has any influence on the primary pathological processes causing the symptoms either positively or negatively. Because of this, and our belief that the secondary complications are less frequent, activity programs are recommended with a realization of the patient's limitations.

One of the characteristic features in multiple sclerosis is the patient's ready fatigability, and this must be carefully considered in carrying out the prescribed program. Patients are encouraged to work to this level and beyond, but not to the point of exhaustion. A clear distinction is often impossible, and in most instances we must rely on the patient's judgment. During an acute exacerbation, intensive exercise programs should be deferred; the energy is directed toward prevention of contractures.

The treatment program is primarily directed toward the acquisition, if possible, of those activities of daily living necessary for proficient function at a specific level in his own environment, i.e., bed, wheelchair, or ambulatory. Whenever possible the specific neuromuscular disability responsible for the deficit in function is corrected by appropriate treatment of the abnormal factors, such as correction or improvement of weak muscles or "coordination exercises". The intelligent use of physical medicine's aids and modalities assumes a significant role in bringing this about. The therapeutic program is directed at functional improvement. An increase in muscle strength is of little value unless it is functionally significant as evidenced by an improvement in the patient's ability to perform his activities of daily living. If therapy is ineffectual or impracticable, attempts must be made to teach the patient to function in as capable a manner as possible with and despite his disability. In certain cases substituted movements can be adequately utilized. Frequently it will be necessary to employ various compensatory prosthetic or self-help devices, including canes, crutches, braces and wheelchairs. By the intelligent exploitation of the patient's residual capabilities and the use of many of these devices several patients have been made physically independent, and some have been capable of returning to work. Complete self-care is a minimal but significant goal.

The nature and extent of the disabilities encountered in the patient with multiple sclerosis are extremely variable. Occasionally, the clinical picture is one of hemiplegia. More commonly spastic paraplegia is encountered. Since the management of these two disabilities has been extensively described, they will not be reviewed here. The basic rehabilitative principles used in their treatment, however, are applicable for the patient with multiple sclerosis.

Ataxia is frequently encountered and may reflect involvement of the cerebellar system and its projections or impairment of proprioception. Frankel's coordination exercises are commonly employed, and vision is more fully utilized as a sensory percept. The cane tip and shoe tip can be painted white to promote better visualization in dim light. Intensive muscle reeducation and progressive resistance exercises, when there is muscle weakness, are often necessary. Occupational therapy may be an extremely valuable phase of this treatment. The results may be of marked value in the properly selected patient.

Spasticity is often one of the most distressing problems. Stretching to prevent spasticity is of little sustained benefit. Proper bracing, however, frequently helps in its management. In occasional instances obturator neurectomy or block has resulted in significant improvement in spasticity and correction of "scissoring".

For gait retraining a precise evaluation of the gait abnormalities is necessary. This includes an appreciation of motor power, the particular muscle groups involved, the degree of incoordination due to ataxia and spasticity, the sensory status, etc., and whether canes, crutches or braces are necessary. The decision as to whether the patient should be braced must be carefully considered in view of the additional weight and the patient's proneness to fatigue. The degree of ataxia and/or spasticity may be severe enough to preclude walking. If so, standing at least 20 minutes a day, either in braces or on a tilt board, is still advocated to prevent the secondary metabolic complications of inactivity. In retraining, balancing exercises are important before walking is begun. Relaxation exercises are used, and in reeducation, reinforcement techniques with residual movement patterns, e.g., Strümpell's phenomenon, are used. A broad-based gait is often deliberately cultivated. Walking in a pool between parallel bars may be helpful in the early stages.

Passive exercises are of limited value, except for the prevention and correction of contractures. Only a few repetitions of the joint range of motion appear necessary in the patient's routine management. Progressive resistance exercises have their prime use in strengthening weak muscles and muscles in which there has been a supervening atrophy of disuse; however, in view of the patient's proneness to fatigue these exercises must be carried out judiciously.

The physical medicine modalities used above have a limited usefulness. Heat, whirlpool, Hubbard tank, and Moistaire cabinets are essentially preheating techniques and useful preliminaries to an exercise program or stretching for the correction of contracture. Electrical stimulation seems to be useful only as an adjuvant in muscle reeducation techniques.

Occupational therapy, in addition to its usefulness in complementing and augmenting muscle reeducation and coordination, psychologically benefits the patient by stimulating interest and motivation. It can also serve for prevocational exploration and pre-vocational and vocational training.

Bowel and bladder control is important to the patient. Often it means the difference between social acceptance and rejection, with all its psychological and economic implications. Bladder symptoms can often be controlled by medicaments, such as atropine, methantheline (Banthine), caramiphen hydrochloride (Panparnit), and bethanechol chloride (Urecholine). If incontinence persists the patient must be trained in the proper use of aids, including urinals, urinary pads, and waterproof pants. With loss of bowel control, strenuous efforts are made to retrain the patient. Most of the patients can accomplish this readily. In only an occasional instance has this proved ineffectual and have the garments and sanitary devices developed for the paraplegic been necessary.

Peripheral Neuritis. The rehabilitation program for the patient with peripheral nerve involvement must frequently be of long duration in view of the fact that regeneration occurs from the proximal section of the nerve and is considered to occur at an average of 1.5 mm./day. In many instances following trauma, operative nerve suture is essential if there is evidence of anatomic interruption.

The rehabilitation program in its initial stages is essentially a preventive one. Passive motions are utilized to prevent joint contractures and the development of adhesions between tendons and their sheaths. These exercises and massage may frequently retard but cannot prevent the reduction in muscle volume and tone. Electrical stimulation is of use for the same purpose, but it must be remembered that this in no way appears to influence the rate of neurone regeneration. Special splints, casts or braces are frequently recommended to prevent stretching of the muscle by the intact antagonist or by gravit. If these are used they should be so designed as to allow daily passive movements of the involved joints. Attempts to stimulate the circulation of the involved part must be carefully carried out. For this purpose gentle massage, the cautious administration of heat, ultraviolet and warm baths, with or without whirlpool can be judiciously utilized. When voluntary motion begins to return the program is supplemented by intensive muscle reeducation procedures, at first with gravity eliminated but gradually increased until progressive resistance exercises are employed. Causalgia is a commonly occurring distressing symptom. Its treatment is frequently very difficult. The limb may have to be carefully protected from inclement weather and almost all usually inocuous trauma to the limb by adequate padding and support. Cautious exploration as to the value of moist heat, and gentle massage is warranted. Despite the discomfort, the importance of passive motion must be emphasized to the patient and it should be carried out regularly if it is at all possible.

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Rehabilitation Medicine In Arthritis

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Among all chronic diseases, with the exception of mental disorders, arthritis exacts the greatest toll in morbidity in today's civilization. With the advances of modern medicine and its conquest of acute infectious diseases, this morbidity like that of other chronic diseases, has sharply been in the ascent. In the United States alone, it is estimated that 147,000 persons are invalided annually by rheumatic diseases. Because of the low mortality rate of rheumatic maladies, it can be anticipated that the percentages of persons disabled by them will continue for some time to mount. Further, they pose a more imminent problem than that of other chronic diseases whose morbidity potentials are limited by mortality factors. The socioeconomic impact of this is obvious, and anticipation of this growing and disruptive force demands both serious consideration and positive steps towards its resolution.

Concern over the increasing numbers of persons disabled by arthritis has aroused interest in the past decade along broad programs of rehabilitation. This was a natural growth in the evolution of Physical Medicine and Rehabilitation as intensive care programs were developed for the rehabilitation of various other severe physical disabilities. The result has been a revision of concept both in terms of feasibility and of treatment goals for the crippled arthritic patient.

In the past, rehabilitation of the patient crippled by rheumatoid arthritis was regarded with considerable question so long as the disease was active and progressive. Not only was the physical exertion inherent in the rehabilitation process poorly tolerated, but there was real concern that this exertion imposed a risk of accelerating the basic disease process. Efforts in rehabilitation, therefore, were confined to those cripples in whom the arthritis had become quiescent or burned out. Largely due to the stimulus of steroid therapy, there has developed a much more optimistic attitude today towards the problem. Results in the past decade have now proven conclusively that with a judicious combination of drug therapy and physical rehabilitation, arthritic cripples often can be salvaged from hopeless dependency and restored to self-sufficient and productive lives.

The task, however, of rehabilitating the arthritic cripple is not a simple one. In contrast to most physical disabilities, which usually are static or improving, it must be anticipated that the disability in arthritis will worsen as the disease persists. In addition, there is the important further factor of pain of the arthritis. These unique aspects seriously compound the problem.

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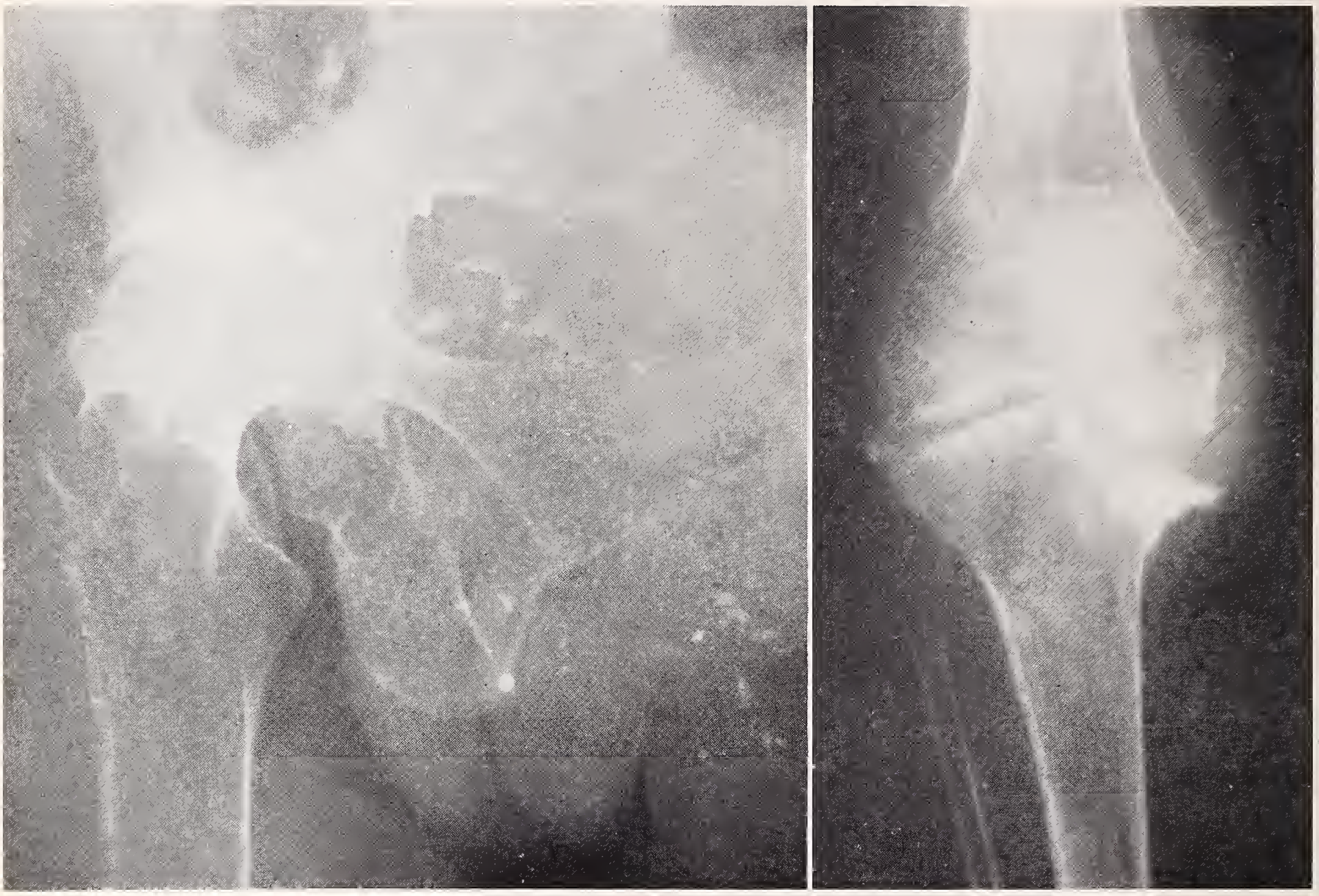
While the basic pathology of arthritis is mainly intra-articular, the overall impact of the disease is upon every activity of the patient's life. Hence, in evaluating a patient for rehabilitation, it is essential that all of the fragments be analyzed, i.e., the physical, social, economic, psychological, vocational and recreational, and that treatment measures be broadly and appropriately directed. The successful restoration of meaningful form to the patient's shattered sphere of living is in direct proportion to the retrieval of these many fragments.

Since rehabilitation of the crippled arthritic is a more tenuous undertaking than those of most other disabilities, it is important that patients be carefully selected and that the extent of goals be projected as accurately as possible. Only through such realistic foresight can the investment in time and energies return dividends. The degree of success in the rehabilitation of the severely disabled arthritic can be predicted with reasonable accuracy in terms of seven major factors. Assessed positively, these seven factors will aid in the rehabilitation process; ignored or overlooked, they can negate it disastrously.

1. *Antirheumatic Drug Therapy*

There is general agreement that among patients crippled by rheumatoid arthritis, the best candidates for rehabilitation are those whose disease is quiescent. In such patients the arthritis is static and control is an accomplished fact. Unfortunately, however, rheumatoid arthritis sufficiently severe to produce major crippling usually remains persistently active even in the late stages. Continued progress with worsening disability must, therefore, be anticipated and the need for active medical therapy faced. Furthermore, since the gamut of therapies have usually not deterred the disease's course, there

Figure I



(a) (b)

Structural damage especially within weight-bearing joints such as the hip (a) or knee (b) may markedly limit functional goals from a mechanical standpoint.

is usually no therapeutic alternative to steroids. If this be the situation, it is imperative that due respect be paid the Jekyll dangers of the latter. If steroid therapy is instituted in chronic cases, the medical will probably have to be continued indefinitely and without interruption. It is essential, therefore, that maintenance dosages be kept as small as possible so as to minimize the danger of undesirable physiologic effects. When the arthritis is of such intensity that adequate dampening cannot be achieved with a small and safe amount of steroids, it is then necessary to favor the latter and be satisfied with partial control rather than tempt the spectre of complications inherent in higher doses. This matter of effective medical control of the arthritis obviously modifies the capacity of the patient to participate in a rehabilitation program.

2. *Extent And Degree Of Articular Damage (Fig. 1)*

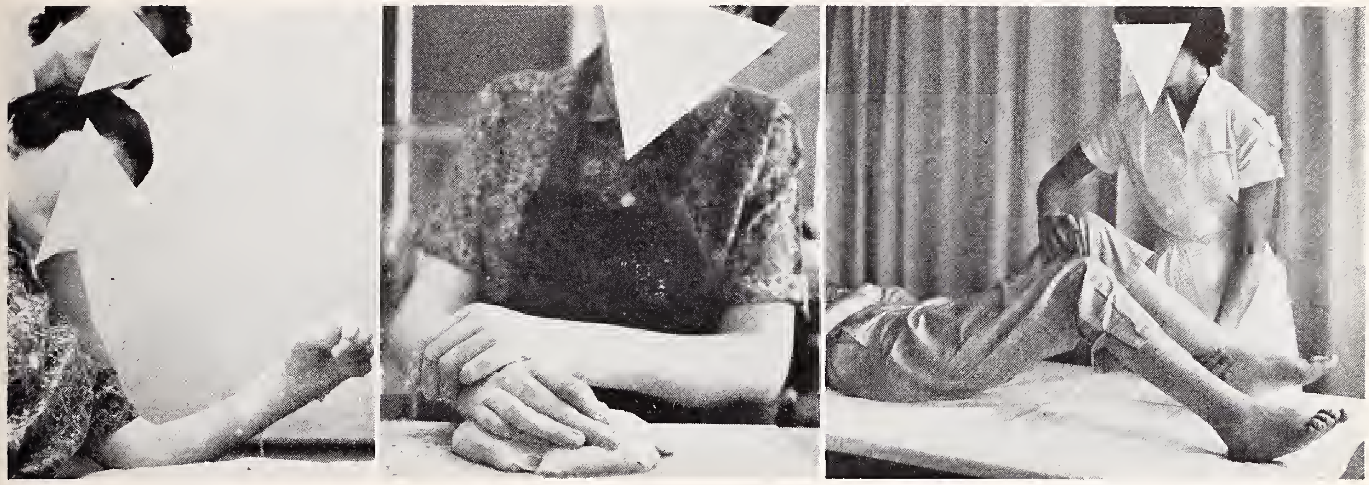
The tolerance of a rheumatoid arthritis joint for physical activity depends upon the severity of the inflammatory process and the degree of intra-articular structural damage which has accrued. These latter changes are not reversed by any therapy short of orthopedic surgical procedures. Since weight-bearing joints are "working horse" joints, damage to knees, hips, etc., is more restrictive than upper extremity joints whose functions are mainly those of prehension and dexterity.

Physical activity must be maintained within the pain tolerance of the joints to avert further deterioration from abusive overuse. Correction of deformity, building of muscle power to a maximum through a remedial exercise program, and the use of braces often are valuable means of increasing a joint's tolerance for functional activity. (Fig. 2) The extent of damage, however, remains an important factor which modifies physical goals.

3. *Motivation Of The Patient*

Probably the most acute influence in determining success or failure of rehabilitation, is the motivation of the arthritic patient for such a program. In a chronic progressive disease such as rheumatoid arthritis, accompanied as it is by increasing disability and pain, the patient's psyche suffers from the relentlessness, the hopelessness and the frustration of the illness. Often there results an exhaustion of psychologic reserve and reversion to passivity and

Figure II



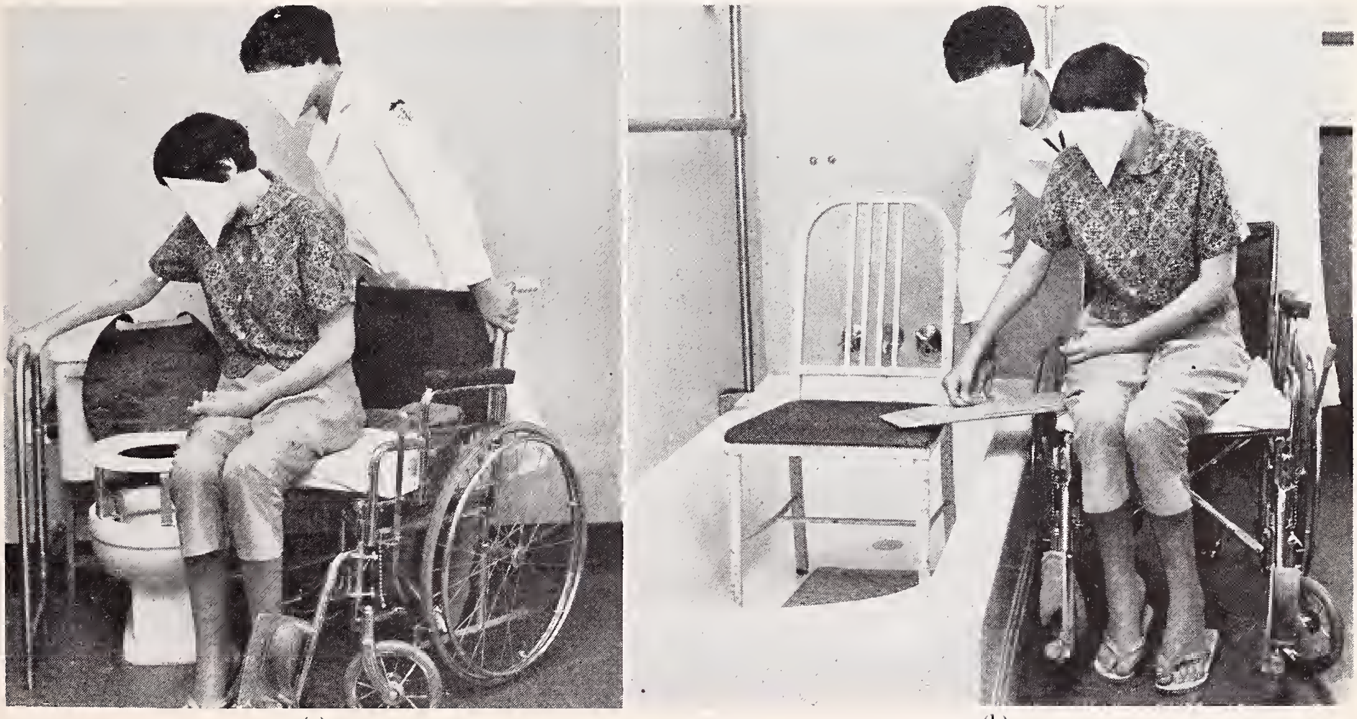
Physical therapy such as the paraffin bath (a) or occupational therapy (b) are individually prescribed for restoring joint mobility and muscle strength necessary for function. Knee flexion contractures (c) must be stretched out and muscle weaknesses reversed with therapeutic exercise before a patient may bear weight.

dependency rarely equaled in any other chronic disease. Since this reversion is slowly cumulative, one cannot expect that reversal will be effected quickly. On the other hand, since success depends largely upon active participation by the patient, strong motivation is essential. To assist the patient, every effort should be exerted at the start of a rehabilitation program to give him a thorough understanding of arthritis as a disease, of treatment limitations, and of reasonable goals which can be expected. Patients who cannot be approached on such realistic ground will be failures in their rehabilitation and *should not* be accepted for treatment.

4. *Functional Training*

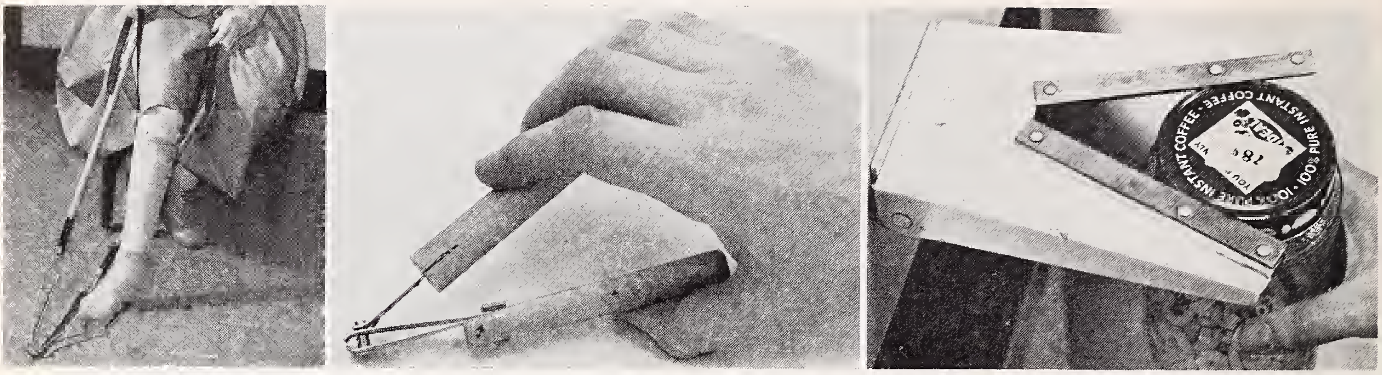
While joint mobility, muscle power, and the joint's mechanical integrity provide rough indices of a patient's functional capacity, these lose their significance if they cannot be utilized in the practical performance of function. Functional training, therefore, is an important part of a pa-

Figure III



The patient is taught new ways of performing activities of daily living. Often these are of temporary expediency for independence until deformities and muscle weakness can be corrected with therapy. Note the safety bars, the elevated toilet seat, and the special wheelchair which permits sideway transfers.

FIGURE IV


(a) (b) (c)

Self-help devices are applicable to all areas of living; i.e., dressing, grooming, toileting, travel, etc. They range diversely from appliances for putting on stockings (a) to large handled nail clippers (b) and kitchen helps such as the vise for opening a jar top (c).

tient's treatment program. As a machine, the human body is a grossly inefficient mechanism with probably less than 25% efficiency. Thus, even in the face of severe mechanical disabilities, patients may be trained to a considerably higher degree of efficiency to compensate for irreversible physical deficits. The process may entail months of tedious training and practice but such an approach often opens the way to broader functional independence. (Fig. 3)

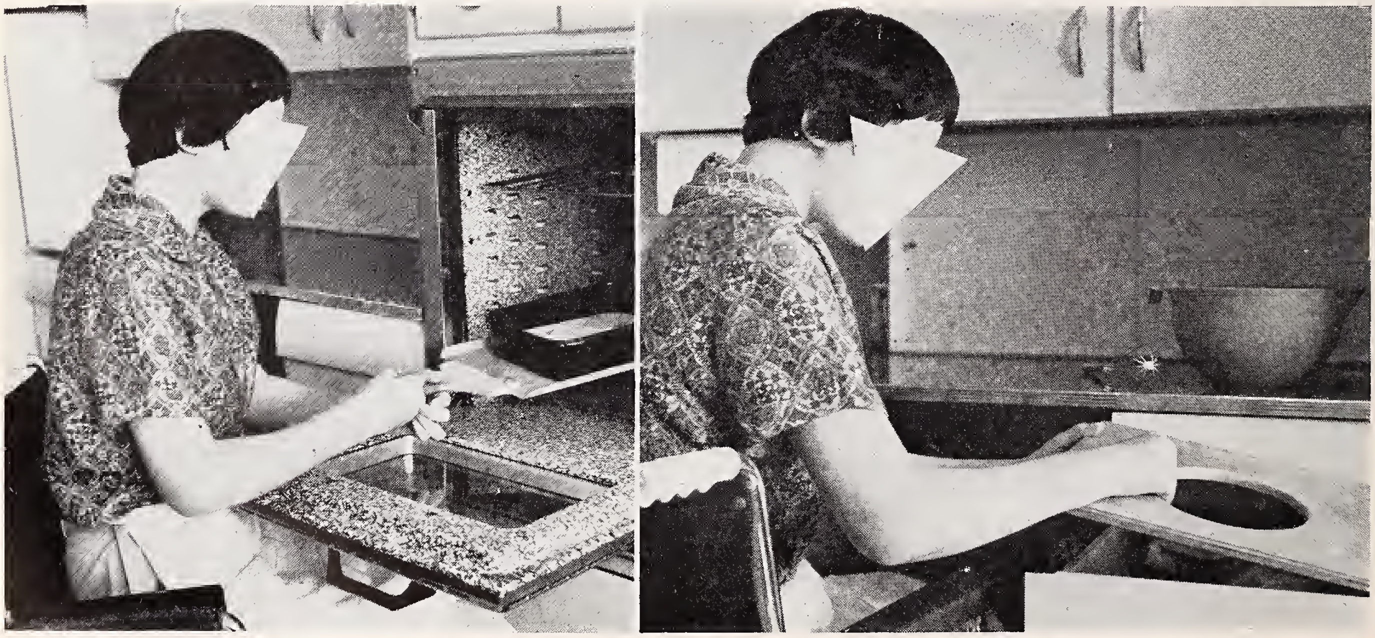
5. *Applicability Of Self-Help Devices (Fig. 4)*

Among patients whose deformities or restrictions in joint mobility prevent the performance of essential functions, it is often possible to solve these impasses with special gadgets or self-help devices. Further, the intelligent use of devices may relieve joints of unnecessary work and thus protect them through energy conservation. (Fig. 5) Hundreds of special devices are widely available to assist the arthritic in eating, dressing, personal hygiene, ambulation, recreation and transportation. These range from long-handled combs for patients who cannot reach their heads to motorized wheelchairs for those with arms too crippled to propel a standard wheelchair.

6. *Corrective Orthopedic Surgery*

Since the advent of more effective drugs for the control of the inflammatory component of rheumatoid arthritis, it is no longer felt that arthritic patients should wait for their disease to reach a burned out phase before being afforded the advantages of corrective orthopedic surgery. Such

FIGURE V


(a) (b)

Since rheumatoid arthritis affects women more often than men, attention to home planning and instruction in energy-saving techniques and devices is a matter for major consideration. This patient uses a special "shovel" in working at her oven (a) and a cutout drawer board (b) to secure a mixing bowl.

orthopedic procedures can now be successfully undertaken while the disease is still active. Indeed to protect against avoidable mechanical wear and tear, surgical correction of deformity is sometimes urgently indicated. The patient, for example, with flexion contractures of knees should not be permitted to ambulate in this position since it may be mechanically disastrous to the joint and result in additional severe structural damage. Such deformities can, with reasonable ease, be corrected by capsulotomies. Success in this type of surgery depends not only upon expert surgical technique but equally upon the diligent cooperation of the surgeon, the therapist, and the patient in an effective therapeutic exercise program both pre-operatively and post-operatively.

7. *Social, Economic, And Vocational Factors*

The optimum goal of rehabilitation is the re-establishment of the individual in a social and economic environment where he can function to his full capacity within the limitations of his disability. The successful achievement of this return to a community is in large measure commensurate with the resources of the patient; of equal if not greater importance, however, is the assistance and resourcefulness of the social worker, the psychologist, and the vocational counselor.

For the patient with permanent disability, the usual types of cursory social services are totally inadequate. To be effective, they must include a detailed inquiry into the family relationships, and an intimate knowledge of the living and working conditions the patient must face after discharge from the structured and protective environment of the hospital. Details which for other patients might be routine may assume critical importance in determining the capacity of a patient to function outside the hospital. The inability to negotiate a few stairsteps from house to street may spell the difference between ability and inability to travel to a job. A doorway wide enough for passage of a wheelchair; or a bed, chair, or toilet of sufficient height to assure the patient's independence may be the factor which determines whether he can live alone in self-sufficiency or whether attendant care or a nursing home will be mandatory.

Similarly, the psychological complexities and vocational problems resulting from chronic disability are not transient but residuals that can be solved only by the efforts of energetic psychologists and vocational counselors working in close liaison.

Job placement of the disabled arthritic is still one of the most difficult problems in rehabilitation. Limited ability to utilize public transportation, the competitive labor market, and the need for specialized placement all restrict employability. Experience, however, has conclusively shown that with proper management and guidance a high percent of unemployed arthritic patients can return to a wide variety of jobs in diverse industries and professions. Results have also shown that work does not necessarily aggravate the basic disease, nor need pain, emotional factors, or physical restrictions interfere with performance. In one vocationally oriented study, subsidized by the New York Chapter of the Arthritis and Rheumatism Foundation, 40% of arthritics who had reached an impasse with employment problems were replaced in jobs suited to their physical handicaps.

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A Children's Rehabilitation Service With A Discussion Of The Problems Of Progressive Muscular Dystrophy And Atrophy

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The number and diversity of details concerning rehabilitation of children with chronic physical disability make it necessaary to select from the numerous possibilities two conditions which can be discussed in moderate detail within the space limitations. For this reason, we have elected to discuss the principles and philosophies of a children's rehabilitation service to indicate the types of professionally trained people who are essential in such a program, briefly to indicate the types of disability which comprise the great majority of patients and finally to discuss some of the rehabilitation problems presented by children with progressive muscular dystrophy or atrophy.

The objectives of a children's rehabilitation program are essentially similar to those of an adult program—namely, to assist the child in developing his maximal physical capacity, independence in activities of daily living and to aid him and his parents in accepting the irrevocable deficit, make an acceptable psycho-social adjustment, and, finally, to find an appropriate educational or vocational program geared to the child's intellectual and educataional potentials and capacities.

Achievement of the above mentioned goal is dependent upon an accurate diagnosis of the basic nature of the child's physical and psychological handicap. It is quite common to detect the presence of a mild degree of physical handicap based on neurological findings, which might indicate a diagnosis of congenital cerebral palsy. However, the actual motor deficit (weakness, stiffness, incoordination or involuntary movement) might be relatively insignificant and the more subtle problems of sensory and perceptual deficits might lead to significant learning disability when the child comes of school age. For this reason the concept of diagnosis must include much more than the limited version of the physical aspects of a neurological examination and must involve the trained personnel essential to detect by appropriate testing, deficits of visual, auditory and somatesthetic sensation and perception. Test instruments must be selected appropriately in order that the deficit present does not prevent the child from performing the test.

The remarkable variation in physical growth and development, neurological and psychological change from the neonatal period through adolescence emphasizes the necessity for appreciation of the developmental age of the child in terms of his physical, psychological, social and emotional growth, and the impact which an unsuitable environment may have on such developmental patterns. Perhaps it is to some extent our failure to provide a comprehensive diagnostic assessment of the child and properly to orient and educate the parent which has led to the origin of special groups particularly concerned with such children as the "brain damaged" child or the "multiply handicapped" child. We feel that there is no such child in existence as the singly handicapped child. Even the child with the relatively common left below elbow congenital amputation invariably has psychological and social problems which are frequently as serious as the amputation itself.

The previously mentioned problems indicate that such a comprehensive diagnosis and evaluation can most effectively be done where there are available trained psychologists, social workers, physical and occupational therapists, speech and hearing diagnosticians, special educators and medical consultants in psychiatry, ophthalmology, otolaryngology, neurology, urology, orthopedics and pediatrics. Almost as important as the consultation itself is the organization which enables the consultant not only to study the patient from the viewpoint

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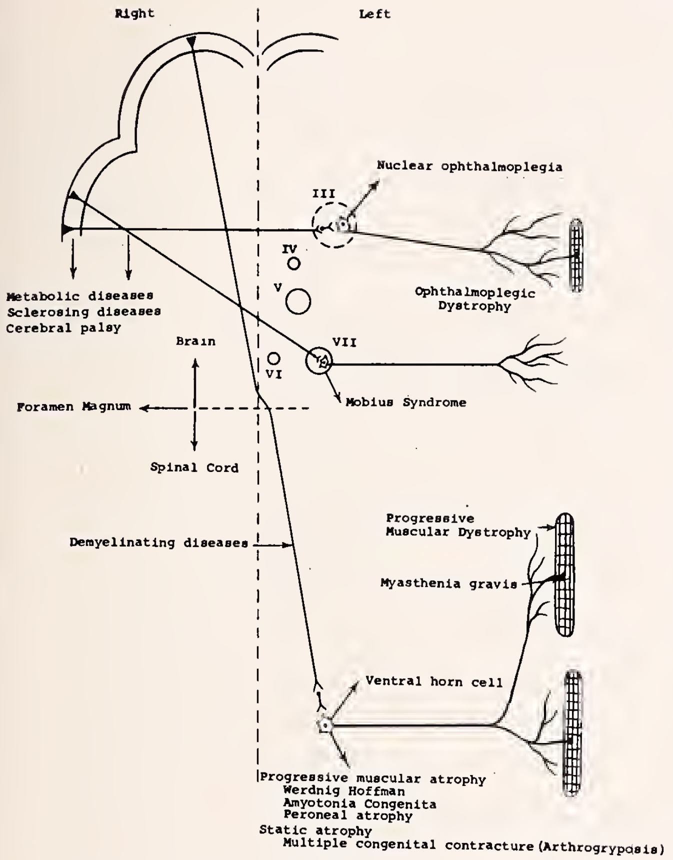

FIGURE I.
Diagrammatic representation of the sites of pathological involvement in syndromes which require consideration in the differential diagnosis of progessive musclar dystrophy.

of his own specialty but to exchange information with all others concerned with the problem in order that his recommendations are realistic in terms of the patient's other medical problems and his social environment.

The great majority of the patients seen in a children's rehabilitation service have physical or psychological impairments which are secondary to almost any condition in the entire gamut of pediatric neurological conditions. The deficits incident to neurological disease are not infrequently confused with progressive primary disease of muscles (progressive muscular dystrophy). The sites of pathologic involvement in a variety of neurological conditions and muscle diseases which are commonly seen on pediatric rehabilitation services are diagrammatically represented in Figure 1. One area of confusion resides in the difficulties of separating the congenital and infantile progressive muscular atrophies (ventral horn cell disease) from the dystrophies (primary degeneration of striated musculature). In making this distinction, one should note the age of onset of the weakness, the sequence of involvement of various muscle groups and the distribution of the weakness. The clinical findings are frequently aided by careful biopsy study, electromyogram and enzyme levels (aldolase, transaminase, etc.). Recently, enzyme study of kindred exhibiting progressive muscular dystrophy has shown elevation of enzymes prior to clinical evidence of muscle weakness.

Perhaps the single example of the problem of distinguishing progressive muscular atrophy from progressive muscular dystrophy is a great oversimplification of the problem because many children are presented to a rehabilitation service because of delayed ambulation development or insidious onset of muscle weakness. It is not possible on this occasion to discuss the host of conditions which may be reflected by delayed ambulation and/or muscle weakness; however, many of the conditions which may present this feature are listed in Table I. In such a tabulation, one cannot acknowledge many of the variations in the syndromes but, in spite of the diversity of the conditions mentioned, any of them listed may present variable degrees of localized or generalized muscle weakness.*

Progressive Muscular Dystrophy

There are a number of clinical types of progressive muscular dystrophy, each characterized by a different age of onset, anatomical site of initial involvement, mechanism of hereditary transmission and rate of progression. The essential clinical features of four of the most common types of progressive muscular dystrophy are indicated in Table II. It is possible that, when the biochemical defects become known, these clinical types of dystrophy may actually have different etiological bases which have in common only the degeneration of striated musculature. The great variability in prognosis in these clinical types of dystrophy is indicated in Figure II and will be mentioned again when management of these conditions is discussed.

Congenital And Infantile Progressive Muscular Atrophy

The second group of childhood conditions characterized by muscle weakness that we wish to discuss is the congenital and infantile progressive muscular atrophies. Children having these conditions are either born with or develop almost universal muscle weakness during the first six months of postnatal life. There is a common belief that two syndromes of quite contrasting outlook occur, namely Werdnig-Hoffman Disease and Amyotonia Congenita (Oppenheim). Both conditions of weakness occur from degenerataion of ventral horn cells

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*The authors wish to acknowledge permission of the W. B. Saunders Company to reproduce Figure I and Table I from a manuscript prepared by one of us (Chester A. Swinyard), which appeared in The Pediatric Clinics of North America, August 1960.

TABLE I. CONDITIONS WHICH REQUIRE CONSIDERATION WITH REFERENCE TO INSIDIOUS ONSET OF MUSCLE WEAKNESS.

Disease	Age of Onset	Initial Area of Muscle Weakness	Prognosis	Assoc. Defects or Diagnostic Points	Inheritance	Neurological	
						Motor	Sensory and/or Mentation
Prog. Musc. Dystrophy:							
Duchenne	2-10 years	Glutei, Abdom., Ant. Tibials. Erector spinae	Poor, die before 25 years	EMG rapid, low voltage. Cardiac involvement	Sex linked recessive	No abnormality	No abnormality
Limb-Girdle	10-40 years	Pectobrachial or pelvifemoral groups	Poor, death middle age	NDNE	Autosomal recessive	No abnormality	No abnormality
Facioscapulohumeral	10-18 years	Shoulder, face, pectoralis maj. lower trapezius	Fair, slow progress	NDNE	Somatic dominant	No abnormality	No abnormality
Myotonic	15-80 years	Hand, forearms, sternocleidomastoid, masseters	Poor	Cataracts Gonadal Atrophy Myotonia	Somatic dominant	Myotonic EMG pattern	No abnormality
Ophthalmoplegic	1-40 years	Extrinsic eye muscles	Good-only disabling	Myopathic EMG pattern	Somatic dominant	Confused type	With Nuclear Atrophy
Prog. Musc. Atrophy:							
Werdnig-Hoffman	6-12 months	Trunk, shoulder, proximal limb	Poor, five years	Neurogenic EMG	Recessive	Lower mot neuron	None
Peroneal Muscular Atrophy	12-50 years	Extensor, evertor foot muscles	Fair, slow	Neurogenic EMG	Dominant or sex linked recessive	Lower mot neuron	Peripheral Neuropathy Sensory Def. common
Amyotonia Congenita	Congenital	Universal	Fair, depends on severity	30% tongue fibrillation Neurogenic EMG	Occasional dominant	Lower mot Neuron	None
Benign Cong. Hypotonia:							
Walton	Congenital	Universal	Fair-good	Myopathic EMG		No abnormality	No abnormality
Ataxia:							
Friedreich's	6-15 years	Distal lower extremity	Poor	Pes cavus, Scoliosis, Nystagmus	Recessive or dominant	Dim. reflexes in low. ext	Proprioceptive loss, vibratory loss
Marie's	after 20 yrs		Fair	Involves olive, pons & cerebellum	Dominant or recessive	Hyperactive	
Inflammatory Disease of Muscle:							
Polymyositis:							
Acute:	Children	Shoulder and proximal extrem.	Poor	Fever and pain frequent		No abnormality	No abnormality
Chronic:	Adults	Lower extremity, upper extremity	Poor	Skin lesions, Muscles tender		No abnormality	No abnormality
Endplate Disease:							
Myasthenia gravis	10-70 years	Ocular, facial, deglutition		Tensilon test EMG		Muscle Weakness Only	No abnormality
Demyelinating Diseases:							
Schilder's Disease	Birth-Senil.	Neck and Extremities	Poor, var wks./yrs.		Familial	Spasticity Athetosis Ataxia	Cortical Blindness, Hearing loss Dementia
Krabbe's Disease	4-6 months	Dysphagia, then generalized	Poor, death one year		Familial	Rigidity Flaccidity	
Multiple Sclerosis	15-50 years	Variable	Poor	Paresthesia, Diplopia, Vertigo	Not of Significance	Spasticity Variable	Impaired
Amyotrophic Lateral Sclerosis	20-50 years	Variable	Poor five years	Fasciculation	Not hereditary	Upper and lower mot neuron	No abnormality
Metabolic disorders of the nervous system:							
Lipoidoses:							
Cerebromacular Degeneration (Tay-Sachs)	3-6 months	Neck, trunk, extremities, becomes universal	Poor, 2-4 years	Prog. blindness Dementia, Paralysis Retinal cherry red sp	Recessive	Flaccidity Spasticity	Retinal Blindness
Cerebromacular Degeneration (Spielmeyer Vogt)	4-18 years	Universal	Slow 10-15 yrs	Macular brown spot	Dominant or recessive	Flaccidity Spasticity	Retinal Blindness
Niemann-Pick Dis.	Same as Tay-Sachs except for Hepatosplenomegaly and skin discoloration Defect of Sphingomyelin metabolism						
Hurler's Disease (Gargoylism)	Defect of phospholipid metabolism. Impaired Vision. Dwarfed. Hepatosplenomegaly. Mental retardation. Generalized weakness.						
Gaucher's Disease	Defect of keratin metabolism. Hepatosplenomegaly. Rapid paralysis when nervous system is involved. Dysphagia and Laryngospasm						
Carbohydrate:							
Galactosemia	Absent PGal transferase activity. Generalized weakness						
Glycogen Storage Disease	Deposit of glycogen in muscles and nerve cells. Generalized weakness						
Maple Sugar Dis.	Defective metabolism of valine, leucine and isoleucine. Retarded motor development						
Protein:							
Phenylketonuria	Deficient phenylalanine hydroxalase. Mental retardation. Delayed motor development						
Aminoaciduria	Hypoaminoacidemia and hyperaminoaciduria. Delayed motor development						
Hormonal Disorders:							
Thyrotoxic dystrophy	Pectoral and Pelvic girdle muscle weakness. Disappears in euthyroid state						
Menopausal dystrophy	Pectoral and Pelvic girdle muscle weakness. Responds to Cortisone administration						

of the spinal cord and, sometimes, of equivalent cells of certain motor cranial nerves. There is a widespread belief that Werdnig-Hoffman Disease is a rapidly progressive disease which terminates fatally at six to ten years of age and that Oppenheim's Disease is more benign and many patients recover. Numerous writers have assembled evidence that these two conditions are but variants of a single disease process and that Oppenheim's Disease is progressive and terminates fatally, the same as Werdnig-Hoffman Syndrome. We have discussed the details of these problems elsewhere (1) (2) (3) (4). It is our belief, based on years of experience with a group of more than forty children with congenital or infantile muscular atrophy, that in many instances neither one of these syndromes are neurologically progressive. Many of these children have extremely low vital capacity and respiratory reserve and have great difficulty in coping with respiratory infections. Furthermore, with growth and development, the very marginal muscle power available becomes inadequate, as the body and its parts become heavier. The muscle weakness causes development of severe structural scoliosis which still further embarrasses an inadequate respiratory capacity and the child may succumb to a respiratory infection. Repeated electromyographic study of our patients has not revealed increased numbers of fibrillation potentials in those patients in whom such potentials were found. More effective antibiotic therapy and more efficient management of respiratory deficits enables these patients to live. A number of our patients are now in their second and third decade of life and their muscle power has remained static for years.

TABLE II

SUMMARY OF THE ESSENTIAL CLINICAL FEATURES OF FOUR TYPES OF PROGRESSIVE MUSCULAR DYSTROPHY

1. *Childhood Dystrophy* (Pseudohypertrophic—Duchenne—severe generalized).
   - A. *Mechanism of hereditary transmission*:
     Sex-linked recessive trait with high mutation rate. Found almost exclusively in the male.
   - B. *Age of Onset*: 2-10 years.
   - C. *Sequence of muscle involvement*:
     Glutei, abdominals, anterior tibial, peroneals, erector spinae. Late and minor face involvement. Muscles of respiration.
   - D. *Prognosis*: Poor. Great majority die before age 20.
2. *Limb-Girdle Dystrophy*.
   - A. *Mechanism of hereditary transmission*: Autosomal recessive.
   - B. *Age on Onset*: 10-40 years.
   - C. *Sequence of muscle involvement*:
     Either pectobrachial or pelvifemoral initial involvement with subsequent involvment of the oppostie girdle musculature.
   - D. *Prognosis*: Fair. Less severe than Duchenne, more rapidly progressive than Facioscapulohumeral type.
3. *Facioscapulohumeral Dystrophy* (Landouzy-Dejerine-mild restricitve).
   - A. *Mechanism of hereditary transmission*:
     somatic dominant. No sex predilection.
   - B. *Age of Onset*: 10-18 years.
   - C. *Sequence of muscle involvement*:
     Face, pectoralis major, lower trapezius, deltoid and other scapular muscles. Erector spinae, abdominals, glutei, peroneal and anterior tibial.
   - D. *Prognosis*: Fair—slow but variable. Some patients with this disability live virtually a normal life expectancy.
4. *Myotonic Dystrophy* (Dystrophia Myotonica, Distal Dystrophy).
   - A. *Mechanism of hereditary transmission*:
     Somatic dominant. Onset earlier in child than parent.
   - B. *Age of Onset*: 15-80 years.
   - C. *Sequence of muscle involvement*:
     Small hand muscles, forearms, anteroir tibial. Masseters and sternocleidomastoid nearly always involved. Levator palpebrae superioris (ptosis), facial muscles.
   - D. *Muscle reactivity*:
     Prolonged contraction of muscles following electrical or mechanical stimulation. Delayed relaxation following strong voluntary contraction.
   - E. *Associated Defects*:
     Gonadal atrophy, reduced libido, cortical cataracts.
   - F. *Prognosis*: Poor. Slowly progressive with involvement of muscles of deglutition and mastication.

Management Of Progressive Muscular Dystrophy And Atrophy

There is not available for either of these groups of conditions a drug which will prevent, cure or, in any way, alter the natural history of these conditions. The principles of management are based upon an effort to keep the patient at a maximal level of physical efficiency and assist with psychosocial adjustment of the patient and his parents as

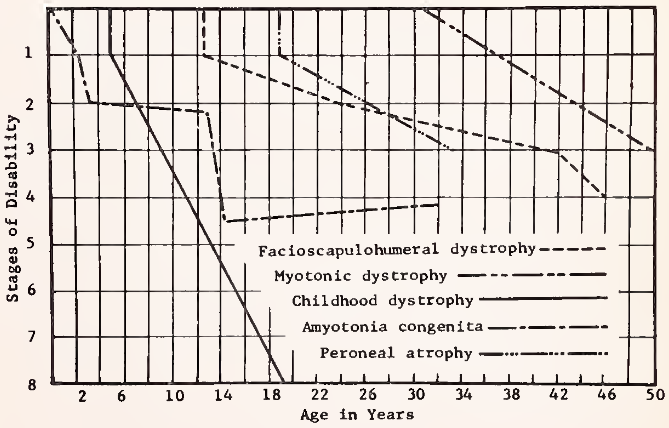

FIGURE II.

Changes in functional ability as related to age in patients with duchenne, facioscapulohumeral and myotonic progressive muscular dystrohy and infantile (amyotonia congenita: oppenheim) and adult (peroneal atrophy) progressive muscular atrophy.

the condition progresses. The maximum level of physical efficiency and effectiveness in activities of daily living can only be obtained if the rehabilitation program prevents development of contractures and superimposed disuse weakness. Such a program may require a judicious exercise program, coupled with appropriate use of braces and crutches. Many of the patients must learn to be independent from a wheelchair.

The planning of an effective rehabilitation program must of necessity take into consideration the rate of progression if so or the static condition of the weakness. In order to portray more graphically the differences in progression of the several clinical types of muscular dystrophy and the more static nature of the congenital and infantile atrophies, we devised eight criteria of functional disability (Table III) which helps us to rate the degree of motor weakness. When the age at which a patient reaches a given stage of functional disability is plotted on a grid, the resultant curves enable one to understand better the natural history of the progressive weakness (Figure 2). In figure two, the rapid weakness characteristic of Duchenne's (childhood) dystrophy contrasts with the slow progression of Facio-scapulo-humeral dystrophy and the relatively static muscle power of a patient with congenital atrophy (Oppenheim). The sharp drop in the curve of the patient with Amyotonia Congenita from age thirteen to fourteen years was related to prolonged immobilization. This patient was ambulatory and was then immobilized for nearly eighteen months for correction of a severe scoliosis and, thereafter, was unable to ambulate.

Table III

Criteria for Rating Eight Stages of Functional Ability in Patients with Progressive Muscular Dystrophy

1. Ambulates with mild waddling gait and lordosis. Elevation activities adequate (climbs stairs and curbs without assistance).
2. Ambulates with moderate waddling gait and lordosis. Elevation activities deficient (needs support for curbs and stairs).
3. Ambulates with moderately severe waddling gait and lordosis. Cannot negotiate curbs or stairs but can achieve the erect posture from standard height chair.
4. Ambulates with severe waddling gait and lordosis. Unable to rise from a standard height chair.
5. Wheelchair independence. Good posture in the chair. Can perform all activities of daily living from chair.
6. Wheelchair with dependence. Can roll chair but needs assistance in bed and wheelchair activities.
7. Wheelchair with dependence and back support. Can roll the chair only a short distance. Needs back support for good chair position.
8. Bed patient. Can do no activities of daily living without maximum assistance.

Use Of Braces, Crutches And Wheelchairs

One of the most distressing complications of rehabilitation management is the development of contractures. Prevention of contracture can usually be accomplished with exercises and stretching: however, braces can also be used effectively for this purpose. If the weakness is marked in the leg muscles and the patient is still able to ambulate, a short leg brace for stabilization of the foot is useful for a period of time. If ambulation is not possible, full control braces are of great value for the psychological and physiological values of daily standing. On occasions, a tilt table may be more appropriate for this purpose.

When a patient's weakness necessitates the use of a wheelchair (Stage 5, Figure 2), it is essential that the chair be appropriately prescribed to meet the patient's needs because the presence of certain features on the chair may mean the difference between wheelchair dependence and independence. There is a tendency for patients to be put into wheelchairs too early. An appropriate program of exercise, stretching, use of braces and crutches can frequently delay wheelchair use. Details of the use of mechanical assistive devices for the conditions have been described elsewhere (1) (2) (3) (4) (5).

All human beings have desires for independence in activities of daily living. As weakness progresse in the muscular dystrophy patient, those concerned must find new ways and devices to assist him in performing these essential activities. If the physician and the professionally trained people who work with him in rehabilitation are alert to these needs, a longer span of independent living and greater pleasure from living can be given to these patients.

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Bioenergetics In Cardiac Rehabilitation

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No other country has enjoyed or benefited as much from improved public health measures and advances in medical science as these United States. The improvements in public health measures and in private medical practice have increased the life span for both men and women since 1900 by 25 years, largely by advances in prevention of infectious and nutritional diseases, and by therapy with antibiotics. The gains achieved in this area, coupled with the increased life span of the individuals has resulted in a great increase in chronic diseases, especially of the cardiovascular type.[1]

There appears to be little doubt that by 1980, 45 per cent of the population will be over age 45. Accordingly, nearly 90,000,000 individuals will be in an age group in which cardiac disease is most prevalent. The cost of heart disease to the nation today in terms of merely dollars and cents exceeds four billion dollars annually. This does not include, of course, the intangible loss in happiness, comfort, and equanimity to the individual and family. It is therefore, imperative to recognize the present as well as the future needs for rehabilitation of the patient with cardiac disease.[2]

The definition of congestive heart failure must be considered prior to introducing and extending the physiologic work of ergometrics and ergonomics. "The syndrome, when fully developed in man, is characterized by dyspnea, generalized edema, which is more severe in the dependent portions of the body, generalized and systemic venous hypertension, diffuse hepatomegaly and possible peritoneal or pleural transudates or both. Bilateral basal pulmonary rales, accentuated pulmonic second sound, pulsus alternans, gallop rhythm, orthopnea, weakness and many other manifestations may be present. Although, there may be variations in detail, all well known to clinicians, the general pattern is consistent.[3] In addition to this clinical description, arterio-venous oxygen difference is of paramount importance.

Eventually, all cardiac patients, whether hypertensive, arterio-sclerotic, rheumatic, or congenital, are more likely to develop the syndrome of congestive heart failure than any other complication.[4] The exact number of individuals who are hospitalized or who are ambulatory with congestive heart failure is unknown, for the statistics on this problem are unsatisfactory and have not been considered in great detail. For diverse reasons, it is difficult to know at the present time the exact incidence of congestive heart failure.

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Rehabilitation of the patient with congestive heart failure involves the same team approach, cooperation, and principles established in other areas of rehabilitation. Specifically, for the patient with cardiac heart failure the physician either alone or in cooperation with the other disciplines must endeavor to obtain the maximal cardiac function with minimal risk to the individual patient so that he can perform his role with the most efficiency and acceptability in the environment in which he lives and works.

In order to understand the limits of work performance of the individual with congestive heart failure various indirect means of assessment of cardiac work have been attempted. Energy measurements of cardiac work have been calculated directly and indirectly. The direct measurement exceeds the indirect measurements by far in accuracy but cannot be employed routinely or continually. These measurements consist of bioenergetic studies of mitochondrial systems prepared from animals in experimental heart failure[5] and coronary sinus catheterization.[6] The indirect measurements are not without criticism but are practical and useful for the evaluation of the patient for cardiac rehabilitation. The methods employed most frequently for the evaluation of energy costs of myocardial work are based upon *indirect* calculation from oxygen consumption of the total individual during a standard sustained exercise, dye-dilution studies, and balistocardiogram.[7,8] The results obtained by Bruce,[8] Kottke,[9] Jones,[10] Benton and Rusk,[11] and Hellerstein and Ford[12] have contributed much to our knowledge concerning the functional capacity of the heart during and following illness. This information coupled with the classic ergometric observations of Passmore and Durnin[13] have placed cardiac rehabilitation on a scientific, and practical basis.

The measurement of energy output for the total body (ergometric studies) is not synonymous with ergometric studies of the heart itself. The work of the heart may be calculated in several ways, but the basic principle involved is to (a) calculate the energy required by cardiac muscle to create sufficient pressure within the myocardium to produce adequate kinetic energy within the large vessels to permit continuous body blood supply and flow. Thus the calculations for cardiac work becomes:

$$W = V_1P + \frac{MV_2^2}{2g}$$

W = Work in Kg. meters
V_1 = Mean aortic pressure in meters of blood
M = Weight of blood
V_2^2 = Square of mean blood velocity
g = Acceleration due to gravitational forces

It is obvious that the work of the heart may be measured by combining the mean aortic pressure and the minute volume in liters, i.e. cardiac output since the kinetic factor is virtually constant with each beat.[14]

Accordingly, the continuous measurement of cardiac output during work performance would be of inestimable value in determining cardiac work ability with reference to generalized energy expenditure. Obviously this is virtually impossible and hence the indirect method of assessing work performance relative to cardiac efficiency is utilized. Thus oxygen consumption, changing heart rate, and changing blood pressure have been measured before, during and after work performance, albeit exercise,[8] various working conditions,[13] or disease processes.

The use of oxygen consumption as an index to cardiac work reserve has been employed by several investigators. It matters little whether the work load measurement has been a tread mill,[8] two-step test variation,[8] or actual on the job work performance, the measurement of total oxygen consumption has little bearing on the energy production within the heart muscle itself, since at best the human heart utilizes 4 to 5 per cent of the total oxygen consumed during any activity. Any measurement introduces an error of at least 20:1 prior to observing any change in total oxygen consumption. The total resting oxygen consumption as measured by the Haldane principle takes into account the oxygen consumed by all organs, including the skeletal muscle, and the efficiency of the pulmonary system. It must naturally follow that the heart therefore is included and not specifically related to the total oxygen measurement. If oxygen consumption during rest is 0.3 liters per minute and is increased to 2.0 liters per minute, it is obvious that the heart will, on theoretical grounds, increase its oxygen consumption by 0.085 liters.[14] It is known that the failing myocardium may increase its oxygen extraction to a greater extent than the normal heart. Thus, it is reasonable to suggest that the failing heart may, without resorting to increased oxygen consumption, but by more efficient oxygen extraction, i.e. arterio-venous difference increased, perform greater work loads without the requirement of increased available oxygen. It is therefore difficult, on basic physiological grounds, to relate oxygen consumption which is calculated to determine total body work energy expenditure to cardiac work performance because it is not only at best only a guess, but also not entirely a physiologic necessity within physiologic limits.

This concept of energy requirements may be further extended by reviewing the energy source of the myocardium. It has been well established that the heart is an aerobic organ and derives most of its energy from such sources. The most important source of cardiac energy is from carbohydrates or derivatives thereof. It is also well known that anaerobic energy will yield only a fraction of the energy which may be derived from the glucose molecule as aerobic energy. The free energy yield from one molecule of glucose if completely combusted as follows: $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$ will be 686,000 calories. Of this total combustion, 57,000 calories are available during glycolysis which is essentially the anaerobic phase, while the remaining 629,000 calories are available via the Krebs or citric acid cycle which is essentially the aerobic phase. The glycolytic phase ends at the formation of lactic and or pyruvate, while the aerobic phase ends at carbon dioxide and water. The anaerobic phase is accompanied by the yield of 2 adenosine triphosphate (ATP) molecules while the aerobic phase yields 36 ATP bonds. The efficiency of each phase for the conversion or trapping of energy as ATP is about 65 per cent.[15]

From the above discussion it becomes apparent that the contribution of glycolysis or the anaerobic phase of oxidation is a small portion of the actual energy for aerobic cells. The heart utilizes fatty acids and proteins as well as carbohydrates, for energy production. Since the same basic rates of anaerobic versus aerobic oxidation holds for these compounds, the heart must, of necessity, be oxygen dependent.

Another important aspect of biochemical processes must be considered for it is essential to the understanding of cardiac rehabilitation. The major source of energy for cardiac muscle is from the release of the terminal phosphate bond of ATP. The most efficient mechanism for obtaining ATP bonds is via the process of oxidative phosphorylation. By this process, the energy available from substrates such as α-ketoglutarate succinate, etc. is passed along as electron equivalents to molecular oxygen via a chain of respiration enzymes such as diphosphopyridine nucleotide (oxidized) (DPN), flavin adenine dinucleotide (FAD) and the cytochrome system. The harnessed energy is trapped in various areas along the chain as ATP by the union or inorganic phosphate and adenosine diphosphate (ADP). This fundamental process which takes place in cardiac mitochondria is largely responsible for the available energy within the myocardium and is transferred to the actomyosin complex during cardiac contraction. Congestive heart failure may be looked upon as a biochemical process, as Bing[16] and others have clearly shown by emphasizing a few of the basic factors involved in congestive heart failure. These observations have been studied and extended by others in the experimental animal.[17]

The syndrome of congestive heart failure may thus be looked upon in simple terms as a bodily state wherein there is a failure of biochemical energy within the myocardium to be converted into mechanical energy for propulsion of blood to meet the requirements of the various organs. Accordingly, there are three theoretical areas in which failure may develop: (a) failure in energy production or substrate availability, (b) failure in energy transportation, and (c) failure in energy utilization.[5,16] According to this enlightened and biochemical concept of congestive heart failure, the correction of failure is basically the correction of bioenergetics in the areas described.

In an experimental study relating bioenergetics to the failing heart, it was learned that mitochondrial preparations derived from failing guinea pig hearts were as efficient in synthesizing ATP from inorganic phosphate and ADP as were mitochondrial preparations derived from normal guinea pig hearts. The P/O* ratios for the substrate α-Ketoglutarate in normal and failing hearts were 2.90 and 2.91 respectively, while the corresponding $Q_{O_2}^{N}$† values were 1170 and 1032 respectively. Under the influence of a combination of cofactors, coenzyme A (CoA), DPN and TPN, the $Q_{O_2}^{N}$ values increased 26.5 per cent and 47.5 per cent respectively, while the P/O ratios did the reverse, i.e. decreased 33.0 per cent in the failure group as compared to 20.0 per cent in the normal group. However, the energy calculations reveal that identical amounts of energy are utilized by each.[18] This observation emphasizes an important concept of cardiac rehabilitation. The heart as an organ extracts more oxygen during failure, in keeping with Starling's observation,[19] because it is still required to supply kinetic energy to the blood for body needs, under conditions of decreased efficiency of oxidative phosphorylation, i.e. in providing ATP from oxygen at the electron level.[18] In addition, the heart is only able to function at peak myocardial efficiency to a point, where it begins to operate at decreased efficiency if the demand upon it is continued and increased. Thus, during performance of increased activity the already failing heart is working at decreased efficiency, i.e. unable to extract sufficient oxygen to convert to ADP to ATP, and if the demand is increased as measured by general oxygen uptake, symptoms of anoxia, e.g. angina pectoris or symptoms of failure to provide kinetic energy, e.g. dyspnea supervene. Accordingly, the general relationship of cardiac oxygen utilization to total oxygen utilization may be totally unrelated by present standards.

* P/O — $\frac{\text{Micromoles of orthophosphate consumed}}{\text{Microatoms of oxygen utilized}}$

† $Q_{O_2}^{N}$ — Microliters of oxygen consumed per hour per milligram of mitochondrial nitrogen.

From the foregoing discussion it becomes increasingly difficult to assume that tests of physical fitness, exercise tolerance tests or tread mill studies offer a true index of cardiac performance in relationship to body requirements. For cardiac rehabilitation, the heart must always be placed in a condition where it meets its demands easily and efficiently. Consequently, the basic principles of cardiac rehabilitation, should be applied i.e. know the exact diagnosis and evaluate the treatment from the viewpoint of the whole patient. There are five other basic principles of cardiac rehabilitation:[4]

1. Evaluate the patient's medical, psychologic, social, and vocational status.
2. Individualize management, including diet, drugs, physical activity, emotional stress, environmental stress, etc.
3. Discuss with the patient the nature of his disease and the prognosis and treatment, as well as the assessment of his capacities and how he can best arrange his life to fit his needs.
4. Make every effort to eliminate the patient's fear of heart disease.
5. Encourage the patient to live the best life possible within the limits (if any) imposed by his disease.

It appears therefore, that Jones' studies and those of Passmore and Durnin are useful and practical, and if they are applied with empiricism will serve as useful guides for the rehabilitation of the cardiac patient. Jones[10] has classified patients with congestive heart failure into the functional classification of the American Heart Association and determined the output in terms of calories per minute. These are summarized in Table I.

It is very important in assaying the performance of work for the cardiac subject to note the effect of peak sustained effort in comparison with intermittent effort, because the same amount of caloric output may be accomplished by a cardiac subject

TABLE I*

THE INTERRELATIONSHIP CARDIAC FUNCTIONAL CLASSIFICATION, PHYSIOLOGIC SYMPTOMS AND ERGOMETRICS.

CARDIAC FUNCTIONAL CLASSIFICATION	PHYSIOLOGIC SYMPTOM	MAXIMUM CALORIES PER MINUTE	
		SUSTAINED	INTERMITTENT
I.	Patients with a cardiac disorder without limitation of physical activity. Ordinary physical activity causes no discomfort.	5.0	6.6
II.	Patients with a cardiac disorder with slight to moderate limitation of physical activity. Ordinary physical activity causes discomfort.	2.5	4.0
III.	Patients with a cardiac disorder with moderate to great limitation of physical activity. Less than ordinary physical activity causes discomfort.	2.0	2.7
IV.	Patients with a cardiac disorder unable to carry on any physical activity without discomfort.	1.5	

* Modified from Jones (10).

TABLE II

ENERGY COSTS OF VARIOUS ACTIVITIES AND OCCUPATIONS (13)

ACTIVITY	CAL./MIN.		CAL./MIN.
Washing and dressing	1.6	Inspector	1.2
Washing face and combing hair	2.5	Printer	2.0
Sitting	1.6	Shoe repairing	3.0
Standing	2.0	Shovelling	10.0
Sewing, 30 stitches/min.	1.1	Postman	10.0
Polishing floor	4.5	Planing hardwood	9.1
Peeling potatoes	2.4	Grass cutting	4.3
Bed making	5.4	Gardening	4.4-5.6
Beating and brushing carpets	7.8	Hoeing	4.4
Climbing stairs	6.0-10.0	Driving a car	2.8
Walking 3.0 M.P.H.	5.6	Golfing	5.0
Typing	1.5	Tennis	7.1
		Cycling	5.0-10.0
		Dancing	5.2

working intermittently over a longer period without danger, while at peak sustained effort the work may be done in a shorter period but the cost could be devasting, e.g. in coronary heart disease.

The choice of occupation may require more than just a casual glance at occupations and ergometrics. There are, in addition, intangible factors which are very specific for each individual and the type of cardiac disorder. An individual for example, who has had a myocardial infarction should not be permitted to engage in an occupation which may endanger the lives of the public, i.e. bus driver, train engineer, or pilot.

The ergometric and ergonomic studies of Passmore and Durnin and others have permitted the removal of the guess work from a physician's instructions to patients. Instead of saying to a bed ridden patient, "Do a little more" the patient may be told to shave in bed (1.0 cal./min.); sit up in bed for an hour (3.0 cal./min.); walk down the hall for 15 minutes (4.0 cal./min.). Thus, by giving specific instructions, the patient's progress may be gauged, e.g. if symptoms of angina or dyspnea, or signs of tachycardia or increased venous presure do not appear with low cal./min. activities, then activities of increased cal./min. are instituted until the patient is completely ambulatory and self-sufficient according to the scheme of activities of daily living.[20] A few of these activities are summarized in Table II.

One of the most important phases in the rehabilitation of patients with congestive heart failure is a proper diagnosis both as to functional and therapeutic classification. With the proper diagnosis, specific medical treatment for the particular type and degree of heart disease may be instituted. In addition to the general supportive and therapeutic measures given to the patient with congestive heart failure such as digitalis, low-sodium diet, diuretics, and vitamins, specific measures for (a) coronary disease may include anticoagulants and an isocaloric diet low in short-chain fatty acids, (b) for hypertensive cardiovascular disease the use of one or more of the many antihypertensive drugs, and (c) in rheumatic heart disease, the use of salicylates and steroids during the early phase of failure may be mandatory. In addition prevention of further rheumatic episodes is in order with the use of antibiotics.

A further word may be said in favor of calculated exercise in coronary heart disease. Exercise has been shown recently to be effective as a protection against coronary heart disease in three areas: (1) it increases collateral circulation in the myocardium;[21] (2) it increases the plasmin serum levels thus aiding in the dissolution of blood clots;[22] (3) it decreases the incidence of atherosclerosis in rabbits fed high-cholesterol diets.[23] The exercise should not be sustained but rather intermittent with an output of not more than 4.0 calories per minute.

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> *Science is an essentially artistic enterprise stimulated largely by curiosity, served largely by disciplined imagination and based largely on faith in the reasonableness, order and beauty of the universe of which man is a part.*
>
> Warren Weaver

CONNECTICUT MEDICINE

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Rehabilitation, 1960

The year 1960 was characterized by a steady growth in the quality and scope of rehabilitation services both in the United States and abroad.

The public state-Federal vocational rehabilitation program hit a new high for the fifth year in a row. The 88,275 disabled men and women represent a 9 per cent increase over 1959.

The Federal program of vocational rehabilitation for disabled veterans under Public Law 16, enacted in March, 1943, ended during 1960. Under this program, administered by the Veterans Administration, more than 615,000 disabled veterans were retrained for civilian life.

Among them were a handless veteran who is now a successful architect, a paraplegic who studied and now practices medicine, a blinded veteran who teaches in a high school and the nation's two living World War II quadruple amputees, one a farmer, the other a lawyer.

The nation's rehabilitation resources continued to increase. A major center was opened in Hot Springs by the Arkansas Division of Vocational Rehabilitation. Work began on two $3,000,000 buildings for the Institute for the Crippled and Disabled in New York City and on a new research-education building at Abilities, Inc., Albertson, L. I.

Dr. John Aldes, director of physical medicine and rehabilitation at Cedars of Lebanon Hospital, Los Angeles, was given the Physician-of-the-Year Award of the President's Committee on Employment of the physically Handicapped.

During the year, death claimed a number of rehabilitation leaders. Among them were Vice Admiral Ross T. McIntire, former chairman of the President's Committee on Employment of the Physically Handicapped; Willis Gorthy, director of the Institute for the Crippled and Disabled, New York City, and Hiram Chappell of the Office of Vocational Rehabilitation, who was a leader in work for the blind.

The highlight of the year internationally was the eighth world congress of the International Society for the Welfare of Cripples, held in New York City. The congress, attended by nearly 4,000 persons from seventy-nine nations, was the largest such international meeting ever held.

Winners of the Albert Lasker Awards of the International Society were Miss Mary E. Switzer, director of the Office of Vocational Rehabilitation, Department of Health, Education and Welfare, Washington; Dr. Gudmund Harlem, Minister of Health and Social Affairs, Oslo, Norway, and Dr. Paul Brand of the Christian Medical College Hospital, Vellore, India.

Three Albert Lasker Awards are given each three years by International Society at its world congresses.

Hall B. Popham of Ottawa, Canada, was elected President of the International Society for a three year term, replacing Sir Kenneth Coles of Sydney, Australia.

The major action of the congress was a change in the name of the thirty-seven-year-old Confederation of National Voluntary Agencies to the International Society for Rehabilitation of the Disabled.

More than any other event of the year, this change in name illustrated the new philosophy developing throughout the world in regard to physically handicapped persons. It demonstrated that the paternalistic approach to protection and welfare of the disabled is being replaced by the dynamic concept of opportunity through rehabilitation.

A major impetus to the extension of rehabilitation services internationally also came from the new international research-demonstration program of the Office of Vocational Rehabilitation.

The financing of these projects is done through the use of counterpart funds—the currencies of other countries that the United States owns as a result of the sale of surplus agricultural commodities. Under the terms of the sales, these funds must be spent in the country making the purchases.

During the year funds totaling $930,000 were made available for projects in Indonesia, Burma, India, Pakistan, Egypt, Israel, Yugoslavia, Poland and Brazil.

A new major resource in Mexico, the Mexican Institute for Rehabilitation, was dedicated in July in Mexico City.

In São Paulo Brazil, the Institute of Rehabilitation of the São Paulo University Faculty of Medicine graduated the first class in its two-year training program for prosthetists. The institute also conducts training programs for physical and occupational therapists.

American University in Beirut, Lebanon, started an amputee rehabilitation program, and the development of a rehabilitation center for children was announced in Teheran, Iran.

By Howard R. Rusk, M.D., reprinted with permission of the author and of The New York Times.

Rehabilitation In General Surgery

I believe it is safe to say that the makeup of most general surgeons is more apt to be of the aggressive rather than of the patient type. The care and handling of the acute surgical emergency is to us far more interesting, intriguing, and challenging than getting a sixty-five year old amputee with a healed stump back on his feet. And yet, both are equally our responsibility.

When all the tubes and drains are out of the complicated biliary case and the fever and jaundice are gone, our pride is likely to remain. This patient is a joy and a triumph to see as he begins to eat again. He's even a pleasure to see in the office for the few remaining checkups. The amputee may very well be a different story. I wonder how many or our arteriosclerotic amputees have been rehabilitated to their greatest potential?

Rehabilitation of the disabled or chronically ill surgical patient is often slow, tedious, and difficult. The results are usually not dramatic. I would like to contrast two cases, a man and a woman of comparable ages one year after leg amputation. The woman was ambulating and independent and had a gentleman caller; the man remains in his bed and wheel chair a tremendous mental and physical burden on himself and his family. These two results occurred because the woman and her family were practically forced to accept a good, long range program and follow it through; while sympathy and pity prevailed in the other case resulting in complete failure of rehabilitation.

There are many situations and conditions in general surgery which require rehabilitation. There is a definite rehabilitation problem with certain types of head and neck surgery, with ileostomies and colostomies where clubs can be most helpful, with burns, with large soft tissue wounds, with pulmonary surgery, with hand and foot injuries, and even with radical mastectomy. While the long term program for many of these patients may be too time consuming or specialized for the surgeon to accept, it is still his responsibility to see that these patients get into the proper hands to receive the right help and guidance.

The agencies for this help and guidance are available to all in Connecticut. Within the hospitals themselves facilities range from small physiotherapy departments to full rehabilitation programs. Once at home the patient may carry on this work with occasional visits to the hospital or with supervision at home by trained personnel. In special cases the patient may be sent to one of the state hospitals such as Cedarcrest or Rocky Hill where fully equipped and manned departments devote their entire time to this effort. Always available is consultation from one of several specialists in this field. Within the next few months specific information about and listing of all these facilities in Connecticut will be published.

Perhaps just as important as directing the patient into a proper program during his convalescence is directing the patient into the proper mental attitude and activity during or even before his acute illness. It is here that the surgeon may well be the dominating figure and influence in the patient's mind. We all strive to reach the best rapport with a patient to give him maximum security and cut down on the old 'adrenal stress'. Isn't this the time to plant the goal of rehabilitation? With the patient as secure as possible, facing a crucial test in his life one might hesitate to describe for him a year's tiresome and lonely fight to return to an active life. Then why not stress merely what the patient will be able to accomplish? The details may be presented later and with much less impact when the goal is clearly visualized.

This goal should be planned for in the beginning. It goes without saying that any single operation such as amputation or repair of tendons is carefully planned to salvage all the use of that extremity or part. It does not go without saying that the most advantage is taken of preoperative and postoperative measures for preventing or diminishing the loss of strength and coordination of that part. This is quite often left to later convalescence when days and weeks may be required merely to return the patient to his one week postoperative status.

It is for these reasons that the State Committee for Rehabilitation is urging the general surgeons to interest themselves in and take a more active part in the rehabilitation of their temporarily invalided patients. It is hoped that in the coming months each hospital in the state will evaluate its own program and ask the committee for help where it is needed. Experts are available to assess and advise on this heretofore somewhat neglected phase of patient care. One needs but to be sufficiently interested to begin to see the need for using and expanding this work.

J. W. Major, M.D.

The Machine And The Doctor

With the rapid increase in the volume of information used by practicing physicians in diagnosis and therapy, it is becoming increasingly difficult to keep informed of developments in the numerous fields of medicine. The result of course is more and more specialization in ever narrowing fields. The problems involving memory, correlation and transmission of information by physicians, will increase and specialization must ever grow narrower. At the same time, there is bound to develop large areas of inefficiently utilized knowledge.

To overcome the difficulty some are turning to electronic computers as a way of processing medical information.[1] In fact, it is already agreed that differential diagnosis, storage and retrieval of medical history data and analysis of medical information can be achieved by computers and this should be of great help as a teaching aid in medical education. Many devices are under study to achieve this aim among the best being a large scale electronic digital computer because it possesses great capacity, speed and flexibility.

The feasibility of this device capable of processing and retrieving medical data and testing whether a system of logic for the analysis of the medical data can be of value to the physician has just been published.[1] In this particular study the computer was programmed to act as an aid to differential diagnosis in hemotologic disease. The symptoms, physical signs and laboratory data characterizing twenty hemotologic diseases were compared with the data of forty-nine hospital cases with hemotologic diagnoses in which the differential diagnosis was written out. The computer stated "whether all the findings needed for a 'positive diagnosis' was present in each case." If a "positive diagnosis" was not presented, then the computer requested further work-up to provide information that would be needed to establish a positive diagnosis. In six cases the information returned from the machine suggested reexamination of the data in order to establish a diagnosis. If the data of the hospital case was correct, then an incorrect "positive diagnosis" was not possible.

It is clear enough that the electronic computer can become a powerful ally of the physician in diagnosis and in keeping knowledge of specific diseases up to date. It probably will help point up areas where there are important deficits in knowledge. As new information from research is developed it can always be fed into a machine and thus continually refining and keeping up to date the description of the disease involved.

It is clear enough that the time is not far distant when computers will become an important aid to physicians in diagnosis and treatment of disease. But let us not lose heart. The physician will not be replaced by the machine any more than excellent textbooks can take the place of the doctor.

L.H.N.

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Physician's Attention To Rehabilitation Needed

The old adage of necessity being the mother of invention is true also for the concept of rehabilitation. The philosophy and principles of rehabilitation were spelled out in the form most generally known today during and following World War II but had their inception as early as the end of World War I. It was at this time that several men throughout the country, particularly along the eastern seaboard, were prominent in this field and it was at this time that the U.S. Public Health Service fostered this principle in the follow-up care of the service connected disabilities of World War I. It was this urgency which fostered the establishment of physical therapy training. These principles were also carried over into private practice by a small number of physicans who continued with this through the years and it was also these principles which resulted in the first establishment of the Bureau of Vocational Rehabilitation. During World War II, because of the tremendous urgency to conserve manpower, and further to make hospital beds generally available, the armed services found it necessary to concentrate on this aspect. It had been found that the usual approach focused on care of the acute circumstance was insufficient to return men to active duty in many instances and hospital facilities were being bogged down by long term problems. Thus, a closer attention and greater effort in the handling of the convalescent phase was found necessary. This resulted in men being returned to duty on a much higher level of function than had been previously possible. Men were also returned to duty through the means of selective placement and became valuable workers within their capacity. It was found further that discharges from hospitals remained discharges without the recurrent readmission which had been previously the experience.

The principles of rehabilitation have been carried over into civilian life since that time. They have been found to be effective and a major help in handling the long term problem. The continuing disability, and lack of development of maximum function resulting in an impaired work activity, is expensive from every point of view. Almost without exception the individual with a long term disability sooner or later becomes a welfare charge which has to be paid for by the community. This means that you and I are paying for this inadequate care which could be prevented by a wider use of the principles and philosophy of rehabilitation.

In this day and age we hear a great deal about the welfare case load and we are all acutely aware of the millions of dollars that are spent annually for the maintenance of these people. We sometimes forget that these are human beings and we often overlook the fact that all welfare is a tremendously expensive item. Rehabilitation can remove many of these people from the welfare rolls. This has been conclusively shown in many areas of this country. Rehabilitation is humane and it is economical. Rehabilitation gives hope to life. Life without hope is a mere existence. Rehabilitation can return people to activity, very often gainful activity and even economic independence.

The objective of rehabilitation is to re-establish peak capacity; it is geared to re-establish function on the highest level possible consistent with the remaining physical impairment as well as to minimize this physical impairment. To phrase it in another way, it is the re-establishment of independence from a personal, psychological, economic, and social point of view consistent with the residual disability.

These principles apply to all patients. Contrary to the opinion of many, these principles are not restricted to patients with orthopedic difficulties but are equally applicable to those with medical disabilities, surgical disabilities, and others.

The physician has always been responsible for the care of his patients and everything pertaining to this care. This has been accepted and recognized by the public and by the medical profession from time immemorial. Similiarly in rehabilitation the physician is responsible for his patent and must see to it that his patient has the opportunity to re-establish the greatest degree of independence that is possible. This is not a responsibility that can be delegated to para-medical personnel. The physician should be prepared to write the prescription for such treatment, to guide that treatment, and to direct and evaluate such training and treatment as well as to be intimately associated with it. Unfortunately this is something which is not being done to nearly the extent that it should be. This is the direct result of lack of interest and probably, in a great many instances, lack of know-how on the part of the responsible physician.

Connecticut is fortunate in being supplied with a nationally recognized school and a good supply of physical therapists. It is also fortunate in having a proportionately large number of physicians well trained in the principles of rehabilitation as well as in having rehabilitation facilities located strategically throughout the state. We are also fortunate in being in a relatively small geographical area so that it is not a tremendous hardship for patients to get to a location where the principles of rehabilitation and the equipment and personnel are available. There is no point in the state that is more than two hours removed from such an area. Consequently, in our instance, distance and time need not be a deterent, and these services are relatively easily procurable. These facilities are located in some of the larger teaching hospitals and they are also located in three different state hospital installations as well as in the several rehabilitation centers. All of these facilities are well staffed and could be handling an appreciably greater case load than they presently are.

Since rehabilitation is an investment in the future for the patient and the community, and since it "adds life to years" even in the aging population group, the physician, therefore, is specifically urged to accept his responsibility for this type of care, as well as the care of the acute circumstance, in a more consistent manner than has been evident up to this time. Rehabilitation is the third phase of medicine and is actually the "pay-off" for all the work that has gone before, during the acute phase of disease and injury, and can result in many instances in the return of the individual to a full productive life.

John C. Allen, m.d.

Lest We Be Misled

Our state universities are supported by the taxes of all the citizens of the state. Our private universities are supported by gifts from capital amassed under the economic system which has produced the most astounding and dynamically rich nation in the world.

We now see the anachronism of groups of persons using our great American universities not only to reshape the thinking of our potential young leaders, but exploiting the prestige of these great institutions for launching much frank socialism. Cloaked in the banners and dignity of famous university names, outpourings of pre-conceived "concepts" of how our society should function are heard everywhere.

One facet of the over-all attempt to change our society concerns the needs for the socialists to do away with voluntary systems, especially the voluntary practice of medicine. Despite common knowledge that tight government control of any large enterprise leads to restriction, slow advance, and to corruption on a disheartening scale, we are being urged to emulate systems based on such regulation.

Aside from the attacks on the voluntary system and the "distrusted entrepreneur" in Medicine, we are concerned with what is happening to the intellectual climate of the American university. We subscribe to the principle of academic freedom, but we hold more firmly to the prinicple of academic responsibility. Freedom without responsibility could mean license for propaganda and indoctrination. When the prestige of the American university serves as the backdrop of socialist propaganda we hold that this is foreign to the tradition of the American ideal in education. We hold that it is unscientific and unscholarly to present for political purposes pseudo-scientific publications made up of confusing but important sounding phrases. We hold, furthermore that it is unbecoming for writers using our institutions to continue to assert in the publications, when questioned regarding their motives and meanings, that the subject matter is "too complex". We feel that this word could conveniently be dropped from academic publications, if for no other reason than it is overworked.

It would seem that we physicians need not only to fight for an American brand of Medicine, but as citizens, to help those struggling for the integrity of American universities.

Alice E. Palmer, M.D.

Reprinted from Detroit Medical News, *August 14, 1961.*

Blue Flu Victims Slow To Get Well

Persons who are "depression-prone" recover more slowly from a siege of flu than do flu victims with higher morale, a study indicated.

The study was reported by John B. Imboden, M.D., Arthur Canter, Ph.D., and Leighton E. Cluff, M.D., departments of psychiatry and medicine, The Johns Hopkins University School of Medicine, Baltimore, in the current Archives of Internal Medicine, published by the American Medical Association.

The study began in August, 1957, before an outbreak of Asian flu. At that time 600 employees at Fort Detrick, Frederick, Md., predominantly men, were given psychological tests. During the following winter, 26 of the subjects contracted influenza.

The researchers found that 14 of the victims recovered in 3 to 14 days, in an average of about 8 days, while 12 patients complained of symptoms for 3 weeks or longer.

The latter group complained most commonly of persisting tiredness or weakness, they said.

All of the patients were men except for one woman in the slow-recovery group.

The severity of the illness and other symptoms were similar among the 26 patients and could not explain the difference in recovery rate between the two groups, the authors said.

However, the results of the psychological tests did serve to differentiate those who recovered relatively quickly from those whose symptoms persisted, they said. The depression and morale loss scores of patients slow to recover were "significantly higher" than the scores of the other patients, they said.

The study confirms previous investigations pointing to an apparent association between emotional disturbance and the persistence of symptoms following acute infectious disease,they said.

Unlike earlier studies, they said, the psychological data in the present study was obtained prior to the illness, indicating that the emotional attitude did not result from the illness.

The psychological data apparently reflect a greater degree of propensity to become depressed rather than actual depression in the slow-recovery group, the authors said, adding:

"It seems likely that depression-vulnerable persons are more apt to respond with some degree of depression-like symptoms to an acute infection than those persons who do not have this vulnerability."

THE PRESIDENT'S PAGE

During the months remaining in 1961 and before the second session of the 87th Congress reconvenes in January 1962, the medical profession of this country, if it is to remain free, must put into action an expanded educational effort directed towards informing the public on methods of financing of medical care, with special emphasis on the problem of those 65 and over. It appears to me that the major contribution to this educational process must be made by individual physicians in their contact with their patients. During the hearing last summer before the House Ways and Means Committee the doctors of America were viciously attacked by the proponents of the King-Anderson Bill using techniques of misstatement, fabrication, distortion and half truth. No means was left unused which would portray the vast majority of the aged as penniless, ill and unable to get medical care. Without doubt the campaign to discredit American medicine will be expanded in the ensuing months. At the close of the last session of the 87th Congress, President Kennedy, at the request of Senator McNamara, promised to give "Social Security Medicine" the highest legislative piority at the next session of Congress. Senator McNamara in turn, has already drawn up plans to hold hearings on the health needs of those 65 and over in 24 cities throughout the country during the Congressional recess. Reflecting on the use Senator McNamara has made of previous hearings under similar circumstances we can be assured that every effort will be exercised to foster passage of King-Anderson type legislation. Furthermore, 1962 is an election year and if one will review the history of social security legislation he will find there has been a constant pattern of liberalization of benefits in election years. Aime Forand, although he has retired from Congress, is now heading a National Council of Senior Citizens for Health Care through Social Security. In spite of the diverse activities of the proponents of government medicine if the medical profession will conduct an intelligent and vigorous campaign of informing the public, the voluntary system of medical care will be sustained.

If the excellent medical care developed in our country and available to our patients is to survive, the individual practitioner must bring to his individual patient an understanding of the dangers in King-Anderson type legislation. If the members of the Connecticut State Medical Society and the doctors throughout the country feel they are too busy to inform their patients of the merits of voluntary medicine or that getting mixed up in politics is bad for their practice then they must accept the consequences—but let the record be clear, each physician member has been informed of his responsibility which cannot be assigned to the Women's Auxiliary, the Chamber of Commerce or other fine groups who are supporting the medical profession and the free practice of medicine.

I can give you every assurance that your State Society, through *Connecticut Medicine* will continue to keep you informed. The Council of the State Society has requested that each County Society expand its Speakers Bureau. As your president, I ask that all members speak up for voluntary medical practice.

Thomas M. Feeney, m.d.

FROM THE GENERAL MANAGER'S OFFICE

William R. Richards, m.d., *General Manager*

160 St. Ronan Street, New Haven, Conn.
Telephone UN 5-0587

James G. Burch
Director of Public Relations

Josephine P. Lindquist
Assistant to General Manager

CALL

SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1961 Semi-Annual Meeting of the House of Delegates will be held in the Hotel Stratfield, 1241 Main Street, Bridgeport, commencing at 2:00 P.M. in the afternoon on December 7.

Thomas M. Feeney, President
Orvan W. Hess, Secretary
William R. Richards, General Manager

INTRODUCTION OF RESOLUTIONS

Article VII, Section 4 of the By-Laws of the Society provides:

Par. 1. All resolutions to be introduced before the House of Delegates at an annual, semi-annual, or special meeting, except resolutions and recommendations from the Council and resolutions and recommendations that may be contained in committee reports, shall be delivered to the General Manager in time for publication in the official agenda for the meeting at which action is to be taken.

Par. 2. Resolutions and recommendations to be introduced before the House of Delegates at an annual, semi-annual, or special meeting by the Council and recommendations that may be contained in reports of standing or special committees of the Society shall be published in the official agenda for the meeting at which action is to be taken. The official agenda shall be distributed to the members of the House of Delegates at the earliest possible date preceding the meeting.

Par. 3. Resolutions and recommendations which do not meet the requirements of paragraphs 1 and 2 of Section 4 of this article may be accepted for action by a session of the House of Delegates by a majority vote of the delegates present. Such resolutions and recommendations shall be referred at once by the presiding officer to reference committees appointed by him from the membership of the House. These reference committees shall consider the resolutions and recommendations referred to them and shall report, with recommendations, to the House before adjournment of the session.

REVISION OF BY-LAWS

The Council adopted the following revision of the By-Laws of the Society which shall be presented at the House of Delegates meeting on December 7, 1961, for consideration. If adopted, the Council recommends that the amended By-Laws become effective at 8:00 A.M. on the morning of the 1962 Annual Meeting of the House of a Delegates.

CONNECTICUT STATE MEDICAL SOCIETY
BYLAWS

ARTICLE I — TITLE AND DEFINITION

The name of this corporation is The Connecticut State Medical Society, Incorporated, hereinafter referred to as "The Society". It is a federacy of its component associations.

ARTICLE II — PURPOSES

Section 1. Purposes

The purposes of The Society shall be to federate and bring into one organization the medical profession of the State of Connecticut; to unite with similar societies in other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standards of medical education; to promote friendly intercourse among physicians; and to enlighten and direct public opinion so that the profession shall become increasingly useful to the public in the prevention and care of disease and in prolonging and adding comfort to life.

Section 2. Non-profit Organization

The Society is not organized, and shall never be maintained and conducted for the pecuniary profit of its members, officers, or employees but shall be, and remain, a strictly scientific and educational corporation, and no member, officer or employee of The Society shall at any time receive or be entitled to receive any pecuniary profit from the operation of The Society except a reasonable compensation for services actually rendered.

Section 3. Ethics

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

ARTICLE III — COMPONENT ASSOCIATIONS

Section 1. Component Associations

The county medical associations in the following counties shall be the component associations of The Society: Fairfield, Hartford, Litchfield, Middlesex, New Haven, New London, Tolland, Windham.

ARTICLE IV — MEMBERSHIP

Section 1. Active Members

Active Membership shall be limited to those members of component associations who are certified to the General Manager of The Society as entitled to exercise all rights of membership in their component associations including the rights to vote and hold office. A physician eligible for Active Membership in The Society becomes an Active Member of The Society on receipt by the General Manager of The Society of dues prescribed by The Society unless he is exempted from payment of dues as provided in Article XII. Active Members ceasing to be in good standing or ceasing to be members of their component associations shall ipso facto have the same status in The Society. Any Active Member expelled from his component association or suspended from its rights and privileges shall ipso facto have the same status in The Society but his right of appeal to The Society shall not be impaired.

Section 2. Associate Members

Physicians and others interested in the science of medicine and public health who are not licensed to practice medicine in the State of Connecticut, may be elected as Associate Members in The Society by majority vote of the House of Delegates at any regular or special meeting. Candidates for Associate Membership shall be required to file with the Council a formal application for membership which shall be passed upon by the Council with recommendations to the House of Delegates. Associate Members shall enjoy all of the rights and privileges of The Society except that they may not vote or hold elective office; they may be appointed to serve upon committees and present papers before The Society or any of its scientific sections.

Section 3. Honorary Members

Eminent physicians may be elected Honorary Members by majority vote of the House of Delegates in accordance with Article VII, Section 1. Honorary members shall not pay dues to The Society or vote or hold office.

Section 4. Life Members

Any member of The Society who has been an Active Member of The Society or of the American Medical Association or of constituent associations of The American Medical Association for thirty-five consecutive years or who has reached his sixty-fifth birthday anniversary and has been an Active Member of The Society or of the American Medical Association for fifteen or more years immediately preceding said anniversary or any Active Member of The Society who becomes totally and permanently disabled shall be eligible for Life Membership. A physician eligible for Life Membership may apply for such membership to the General Manager of The Society and shall become a Life Member on approval by the Council of such application. Life Members shall not be subject to dues or assessments but shall be accorded all the rights and privileges of active membership in The Society including the rights to vote and hold office.

Section 5. Student Members

Any person whose legal or family residence is in the State of Connecticut who is a regularly enrolled student and a candidate for the degree of Doctor of Medicine in an acceptable medical school, as provided in Section 20-11 (1959) of the General Statutes of Connecticut, or any person who is a student in an acceptable medical school located in the State of Connecticut may become a Student Member of The Society. Also, physicians not licensed to practice medicine in Connecticut who are serving as interns or residents in hospitals in Connecticut, for the purpose of extending their education and not primarily for remuneration, may become Student Members of The Society. Such membership shall be obtained by applying to the Council of The Society on a form provided for that purpose and election by vote of a majority of the Council. Student Members shall enjoy all of the rights and privileges of membership in The Society except that they shall not be eligible to vote or hold office. Student Members shall pay no dues.

Section 6. Limitation To One Membership

A member shall hold only one type of membership in The Society at any one time.

ARTICLE V — HOUSE OF DELEGATES

Section 1. Powers And Duties

The superintendence and management of The Society is vested in the House of Delegates. The House of Delegates has the powers provided by the Charter of The Connecticut State Medical Society, as amended, which include the power to make such bylaws and regulations for the due government of The Society as may be deemed necessary. The House of Delegates is the legislative body of the Association. The House elects the general officers and certain boards and committees to conduct some of The Society's affairs but delegates to the Council all powers necessary to act as the executive and administrative body of The Society while the House of Delegates is not in session. Boards and committees elected by the House of Delegates shall be supervised by the Council between meetings of the House and shall make written reports through the Council to the House. The House of Delegates may provide for a division of the Scientific Assembly of The Society into sections for the presentation and discussion of subjects pertaining to the science and art of medicine, may make rules and regulations for the conduct of such sections, may create new scientific sections and may discontinue any existing scientific section.

Section 2. Composition

The House of Delegates shall be composed of: (a) delegates elected by the component associations according to the apportionment provided in Section 4 of Article V of these Bylaws; (b) those members of the Council who are eligible to vote in the Council.

Section 3. Eligibility

In order to be eligible for membership in the House of Delegates, a physician must have been an Active Member of The Society for at least the two years immediately preceding the session of the House in which he is to serve.

Section 4. Apportionment

The number of delegates from the component associations shall be proportional to the number of Active Members of the Connecticut State Medical Society in the respective county associations. Each component association shall be entitled to send from its membership to the House of Delegates each year one delegate for every thirty-five, or fraction thereof, Active Members and Life Members of the Connecticut State Medical Society as recorded in the office of the General Manager of The Society on December 31 of the immediately preceding year.

Section 5. Registration

Par. 1. Certification. Before every session of the House of Delegates, each component association shall deposit with the Secretary of the State Society a certificate or list signed by the president or secretary of the component association or the General Manager of the Society, listing members entitled to be seated in the House of Delegates on the basis of regular election, appointment or ex-officio status.

Par. 2. Registration. Before being seated at any annual, semi-annual, or special meeting of the House of Delegates, each member shall register with the Secretary of the Connecticut State Medical Society. The Secretary shall keep a roster, and shall be responsible to the Speaker of the House for the proper qualifications of the members seated.

All cases, wherein doubt may exist that a member is properly qualified to sit in the House of Delegates, shall be referred by the Secretary to a Reference Committee on Credentials as appointed by the Speaker of the House. At the beginning of each session of the House of Delegates, immediately after Roll-Call, the Chairman of the Committee on Credentials shall report to the House. Any member of the Society who is aggrieved by a decision of the Committee on Credentials may at this time appeal to the House, and may be qualified to sit by a vote of the majority present and voting.

Par. 3. Vacancies. When an elected delegate from a component association and his elected alternate are unable to attend a specified session, the appropriate authorities of the component association concerned may appoint, in accordance with the bylaws of that component association, a substitute delegate and a substitute alternate. A substitute delegate or his alternate may be seated by the Reference Committee on Credentials provided he has been an Active Member of the Connecticut State Medical Society for at least two years immediately preceding the session of the House in which he is to serve and provided he is properly identified as the substitute delegate or substitute alternate selected by the appropriate authorities of the component association concerned.

Section 6. Status After Seating

A delegate whose credentials have been accepted by the Reference Committee on Credentials and whose name has been placed on the roll of the House shall remain a delegate until the final adjournment of that meeting of the House of Delegates. If a delegate, once seated, is unable to be present on account of sickness or any other emergency his place may be taken by an alternate as approved by the Reference Committee on Credentials.

Section 7. Regular Meetings

The House of Delegates shall meet annually during the week of the Scientific Assembly of The Society at the time and place designated by the Council. The House of Delegates shall hold one semi-annual meeting at the time and place designated by the Council. The order of business at each annual and each semi-annual meeting shall be that arranged by the Speaker of the House of Delegates in accordance with Article V. Section 12 and approved by the Council. Business that may properly come before an annual meeting may be considered at a semi-annual meeting subject to the provisions of the Bylaws.

Section 8. Special Meetings

Special meetings of the House of Delegates shall be called by the Speaker of the House of Delegates on written request of twenty-five or more delegates elected as delegates by and from component associations, or on written request of a majority of the members of the Council eligible to vote in the Council. When a special meeting is thus called, the General Manager shall mail a notice to the last known address of each member of the House of Delegates, at least ten days before the special meeting is to be held. The notice shall specify the time and place of meeting and the purpose for which the meeting is called. No business shall be considered at a special meeting except that for which it was called.

Section 9. Open And Closed Sessions

Every regular or special meeting of the House of Delegates shall be an open session to which any person may be admitted as an observer, unless by majority vote of the seated delegates a portion of the meeting is moved into a closed session. A closed session shall be restricted to members of The Society, to members of the staff of The Society or the staff of a component association, to official delegates from other medical societies, and to such other persons as may be admitted by majority vote of the House.

Section 10. Executive Session

By two-thirds vote of the seated delegates, a portion of any meeting may be moved into executive session. An executive session shall be limited to members of the House of Delegates as defined in Sections 2, 5 and 6 of Article V of the Bylaws and to such employees of The Society as the Speaker deems necessary for the functioning of the House during the executive session.

Section 11. Quorum

A quorum at any meeting of the House of Delegates shall consist of a majority of the sum of the number of delegates to which all component associations are entitled in accordance with Section 4 of Article V of the Bylaws plus the number of members of the Council eligible to vote in the Council.

Section 12. Procedure

PAR. 1. ORDER OF BUSINESS. The following shall be the general order of business at all sessions of the House of Delegates:

1. Called to order by the Speaker.
2. Roll-Call.
3. Report of Credential Committee.
4. Speaker's remarks and appointment of Reference Committees.
5. Reading and adoption of the minutes of the previous meeting.
6. Introduction of guests.
7. Reports of officers.
8. Reports of committees.
9. Presentation of awards.
10. Old business.
11. New business, and reports of Reference Committees.
12. Adjournment.

At any meeting, the House, by majority vote, may change the order of business.

PAR. 2. PRIVILEGE OF THE FLOOR. The House of Delegates, in any session, by a two-thirds vote may extend an invitation to address the House to any person, who in its judgment, might assist in its deliberation.

PAR. 3. RESOLUTIONS. All resolutions to be considered as regular business at any regular meeting of the House of Delegates must be in the hands of the Speaker not later than seventy-two hours before the opening of that meeting. All resolutions and recommendations published in the official agenda distributed to the members of the House prior to the meeting at which action is to be taken shall be considered as regular business. Resolutions presented later than seventy-two hours before the opening of a meeting will be referred for consideration as regular business by the House only when they are presented by the Council or accepted for consideration by majority vote of the delegates present. Any resolution which does not qualify in accordance with the aforesaid provisions for consideration as regular business may be accepted for action by a majority vote of the delegates present and, if so accepted, shall be referred at once by the Speaker to a reference committee. Any such reference committee shall consider resolutions referred to it and shall report, with recommendations, to the House before adjournment of the meeting.

PAR. 4. REFERENCE COMMITTEES. The Speaker of the House of Delegates shall appoint from the members of the House such reference committees as the House may approve. Each committee shall consist of five members. The chairman shall be appointed by the Speaker. These committees shall serve only during the meeting at which they are appointed.

Section 13. Referendum

The House of Delegates at any meeting may, by a two-thirds vote of the members seated in the House, submit any question pending before it to a general referendum of Active Members of The Society who may vote by mail or in person and, if the members voting shall comprise a majority of the Active Members of The Society, a majority of such vote shall determine the question and the result shall be binding on the House of Delegates.

ARTICLE VI — GENERAL OFFICERS

Section 1. Designations

The general officers of The Society shall be a President, a President-Elect, a Vice-President, a Secretary, a Treasurer, a Speaker of the House of Delegates, a Vice-Speaker of the House of Delegates and the Delegates to the American Medical Association.

Section 2. Qualifications

A general officer must have been, for at least two years immediately preceding his election, an Active Member of The Society.

Section 3. Term Of President-Elect

The President-Elect shall be elected annually by ballot by the House of Delegates. He shall serve as President-Elect until the annual meeting of the House of Delegates next ensuing after his election and shall become President upon his installation in the course of that annual meeting, serving thereafter as President until the installation of his successor.

Section 4. Terms Of Other General Officers

PAR. 1. ELECTION. The Vice-President, the Secretary, Treasurer, and the Speaker and Vice-Speaker of the House of Delegates shall be elected annually by ballot by the House of Delegates, each to take office immediately after the adjournment of the annual meeting at which he is elected and each to serve for one year or until his successor is installed. The House of Delegates shall elect by ballot delegates and alternate delegates from The Society to the House of Delegates of the American Medical Association in accordance with the constitution and bylaws of that body. These delegates and alternates shall take office on the first of January following their election and shall serve terms of two years.

Par. 2. Vacancies. In the event of a vacancy in the office of Secretary, Treasurer or Vice-Speaker or Delegate or Alternate Delegate to the American Medical Association, the Council shall fill the vacancy by appointment of an Active Member of the Society to serve until the next regular meeting of the House of Delegates at which a successor shall be elected.

Section 5. Successor To The President

If the President dies, resigns or is removed from office, the President-Elect shall immediately become President and shall serve for the remainder of the term of his immediate predecessor. If said remainder of the term served is less than six months, he shall also serve as President until the second annual meeting of the House of Delegates following his election as President-Elect. If a President-Elect succeeds to the Presidency six months or more before the following annual meeting of the House of Delegates, he shall serve thereafter as President until the installation of his successor.

Section 6. Successor To The President-Elect

If a vacancy occurs in the office of President-Elect less than six months before the following annual meeting of the House of Delegates, the Vice-President shall immediately become President-Elect and shall serve as President-Elect until the second annual meeting of the House of Delegates following his election as Vice-President at which meeting he shall become President upon his installation in the course of that meeting, serving thereafter as President until the installation of his successor. If a vacancy occurs in the office of President-Elect six months or more before the following annual meeting of the House of Delegates, the Vice-President shall immediately become President-Elect and shall serve as President-Elect until the next ensuing annual meeting of the House of Delegates at which meeting he shall become President upon his installation in the course of that annual meeting, serving thereafter as President until the installation of his successor.

Section 7. Acting President

If a vacancy occurs in the office of President and there are simultaneous vacancies in the successor offices defined in Article VI, Sections 5 and 6, the Secretary shall assume the duties of the office of President; the Speaker of the House of Delegates shall forthwith call a special meeting of the House of Delegates for the purpose of electing a President, a President-Elect and a Vice-President for the remainder of the terms; and the Secretary shall serve as Acting President until said three officers elected at that special meeting are installed in the course of that special meeting.

Section 8. Duties Of The President

The President shall preside at all meetings of the Society. He shall be an ex-officio member of all committees. He shall appoint all committees not otherwise provided for in these Bylaws, subject to confirmation by the Council. He shall visit the component medical associations. He shall perform such other duties as the House of Delegates or the Council shall direct.

Section 9. Duties Of The President-Elect

The President-Elect shall aid and assist the President and shall officiate for the President during his absence or at his request.

Section 10. Duties Of The Vice-President

The Vice-President shall aid and assist the President-Elect and shall officiate for the President during the absence of both the President and President-Elect or at their request.

Section 11. Duties Of The Secretary

The Secretary, in addition to the rights and duties ordinarily devolving on the secretary of a corporation by law or custom and those granted or imposed in other provisions of the Charter and these Bylaws, shall perform such duties as may be specified by the House of Delegates or the Council. The Secretary shall make a report to the Annual Meeting of the House of Delegates.

Section 12. Duties Of The Treasurer

The Treasurer, in addition to the rights and duties ordinarily devolving on the treasurer of a corporation by law or custom, and those granted or imposed in other provisions of the Charter and these Bylaws, shall supervise the receipt of all funds due the Society, and bequests and donations made to the Society, and shall allocate funds as directed by the Council. The Treasurer shall give bond in a sum and manner of bonding prescribed by the Council. The Treasurer shall make a report to the Annual Meeting of the House of Delegates.

Section 13. Duties Of The Speaker

The Speaker of the House of Delegates shall preside at all regular and special meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. He may address the House of Delegates at the opening of any meeting of the House of Delegates, limiting his address to matters of conduct and procedure in the House of Delegates. He shall have the right to vote in the House of Delegates only in case of a tie. He shall appoint a Committee on Credentials of five members prior to each meeting of the House of Delegates, and name a chairman thereof.

Section 14. Duties Of The Vice-Speaker

The Vice-Speaker shall aid and assist the Speaker and shall officiate for the Speaker during his absence or at his request. In case of death, resignation or removal of the Speaker, the Vice-Speaker shall immediately become Speaker and shall serve for the remainder of the term of his immediate predecessor. Except when he is officiating for the Speaker, the Vice-Speaker shall have full voting rights in the House of Delegates.

Section 15. Duties Of The Delegates To AMA

The elected Delegates, or in their absence, the Alternate Delegates, shall represent the Society in the American Medical Association in accordance with the constitution and by-laws of that association, and shall report to the Council and the House of Delegates of The Society.

ARTICLE VII — THE COUNCIL

Section 1. Powers And Duties

Par. 1. General. The Council shall be the executive and administrative body of The Society while the House of Delegates is not in session and shall control all arrangements for all meetings of The Society.

Par. 2. Chairman. The Council shall annually elect from its membership a chairman who shall preside at all meetings of the Council. In his absence, the President shall preside.

Par. 3. Finances. The Council shall be the finance committee of The Society and shall superintend and direct all financial transactions of The Society. The Council shall prepare and submit annually to the House of Delegates a budget for the operation of The Society for the ensuing year.

Par. 4. Censorship. The Council shall be the Board of Censors of The Society. It shall consider all questions involving the rights and standing of members in relation to other members, to the component associations, or to this Society. All questions of an ethical nature brought before the House of Delegates or a general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of component associations on which an appeal is taken, and its decision in all such matters shall be final.

The Council shall serve as a board of review for cases of claimed malpractice referred to it by the Committee on Medical Ethics and Deportment of any component county association.

Par. 5. Honorary Members. The Council may present annually to the House of Delegates the names of not more than three eminent physicians as candidates for Honorary Membership in The Society.

Par. 6. Honorary Degrees. The Council may recommend to the House of Delegates the bestowal of an Honorary Degree in medicine upon any person not a physician, distinguished in the sciences of medicine or for contribution to human welfare.

Par. 7. Nominations. The Council shall be the Nominating Committee of The Society. The President shall be the chairman of the Nominating Committee. The Nominating Committee shall report its nominations to the first session of each annual meeting of the House of Delegates; following this report nominations may be made from the floor.

Par. 8. Annual Report. The Council shall make an annual report to the House of Delegates.

Par. 9. Student Members. The Council shall elect Student Members of The Society.

Par. 10. Employees. The Council shall have power and authority, subject to the limitation imposed by paragraph one of Section 2 of Article VII of these Bylaws, to employ, discharge, arrange duties, and fix compensation of and for any employee whom it may find necessary for conducting the affairs of the Society.

Par. 11. Counsel. The Council shall employ legal counsel and/or a legislative agent subject to the directives of the House of Delegates.

Par. 12. Special Appointments. The Council annually shall appoint fourteen members of the Society to serve on a Panel for Physician-Hospital Mediation (House of Delegates, December 6, 1960). Appointments shall be made as follows: One member each from the component associations for the counties of Litchfield, Middlesex, New London, Tolland and Windham, and three members each from the component association for the counties of Fairfield, Hartford and New Haven. From this Panel, the President of the Society, on request, shall appoint a sub-panel of three members who have no connection with the case to be mediated, either by reason of location or type of practice, hospital affiliation, personal association or other pertinent consideration, which sub-panel shall review and assist in resolving disagreements between members of the Society and hospital administrations wherein disagreement persists after the procedures recommended by the Joint Commission on the Accreditation of Hospitals or their equivalent have been carried out. Each such panel, when appointed, shall have access to all necessary and desirable legal counsel upon authorization by the Council.

Par. 13. Divisional Board Chairmen. The Council shall annually appoint all Divisional Board Chairmen, who shall present annual reports to the House of Delegates.

Section 2. Composition

The Council shall consist of the General Officers, any Active Member of The Society who is serving as a general officer of the American Medical Association as defined in Section 1 of Article VII of the Constitution of that Association during his tenure as such general officer, one Councilor and one Associate Councilor from each component association, and one Councilor-at-Large. The General Manager and Editor of Connecticut Medicine may participate ex-officio, and without the right to vote, in meetings of the Council.

Section 3. General Manager

Par. 1. Appointment. The Council shall appoint a General Manager, subject to the approval of the House of Delegates.

Par. 2. Duties. The General Manager shall exercise all such powers, shall carry out all such duties, and shall observe all such directions and restrictions as the Council may from time to time impose upon him, but in default thereof, the General Manager shall manage and supervise the ordinary affairs and business of The Society, and do any and all acts and things necessary or conducive to such management. The duties of the General Manager shall include but not thereby be limited to the following:

a) To manage The Society's office, grounds, equipment and other property.

b) To employ such assistance as may be approved by the Council and to supervise all employees of The Society.

c) To maintain membership and biographical records.

d) To collect The Society dues except from the members of any component association which collects The Society dues.

e) To collect American Medical Association dues from all members of The Society who are members of the American Medical Association.

f) To make necessary business arrangements, including those for commercial exhibits.

g) To record attendance and proceedings, and maintain records of all meetings of the House of Delegates, the Clinical Congress, the Council, and committees of the Society.

h) To maintain The Society's financial records in cooperation with the Treasurer, The Society's bankers and auditors.

i) To pay authorized expenditures from funds allocated by the Treasurer.

j) To conduct the official correspondence of The Society including notifying members of meetings, officers of their election and committees of their appointment and duties.

k) Provide guidance services to physicians seeking professional placement in Connecticut.

l) To maintain working contact and cooperation with the component associations of The Society and with the Woman's Auxiliary.

m) To maintain active liaison with State government agencies.

n) To maintain active liaison with the headquarters of the American Medical Association.

o) To maintain active liaison with voluntary health agencies serving Connecticut.

p) To implement and coordinate the activities of The Society with respect to legislative programs.

q) To implement and coordinate The Society's public relations and publicity programs.

r) To aid and assist the officers, boards and committees of The Society in the performance of their powers and duties.

Section 4. Liaison Committee With CMS

The Council shall name a Liaison Committee with the Board of Directors of the Connecticut Medical Service, Inc., which shall meet in joint conferences with a similar Liaison Committee of the Board of Directors of Connecticut Medical Service, Inc. with the object of promoting cordial and effective liaison between The Society and the Connecticut Medical Service, Inc. Through the medium of such joint conferences, there shall be prior review of any proposed new CMS subscribers' contracts and contracts with CMS participating physicians and prior review of any proposed major changes in the bylaws of Connecticut Medical Service, Inc., to the end that The Society and Connecticut Medical Service, Inc. shall operate, as far as possible, in mutual harmony and agreement.

Section 5. Terms Of Council Membership

Par. 1. General Officers. The terms of membership in the Council of the general officers of The Society, and any general officer of the American Medical Association shall be the terms of their offices as defined in these Bylaws.

Par. 2. Councilors and Associate Councilors. Each County Association shall have one Councilor and one Associate Councilor elected at their annual meetings.

A Councilor and Associate Councilor who shall serve for two years shall be elected at the annual meeting of each of the County Associations in Hartford, New London, Windham, and Middlesex Counties in the odd-numbered years, and a Councilor and Associate Councilor who shall serve for two years shall be elected at the annual meeting of each of the County Associations in New Haven, Fairfield, Litchfield, and Tolland Counties in the even numbered years.

These Councilors and Associate Councilors shall assume office immediately following the Annual Meeting of the House of Delegates.

Par. 3. Councilor-at-Large. The Council may, in its discretion, recommend to the House of Delegates at any annual meeting, the election of a Councilor-at-Large, who shall serve for a term of one year.

Par. 4. Limitations of Tenure. No Councilor or Associate Councilor elected by a component association shall serve more than three successive terms of two years each in his respective office, but after a lapse of one term of two years such Councilor or Associate Councilor shall be eligible for re-election.

Par. 5. Vacancies. Any vacancy in the office of Councilor or Associate Councilor from a component association shall be filled by that component association. Any vacancy in the office of Councilor-at-large may be filled by the Council by appointment of an eligible member of The Society to fill the unexpired portion of the term.

Section 6. Meetings

Par. 1. Regular and Others. The Council shall meet at least every two months throughout the year, except during the months of July, August, and September, and at such other times as a meeting may be called by the Chairman of the Council or upon petition of three members of the Council. The President shall call the initial meeting of the Council as soon as possible after the Annual Meeting of the House of Delegates, and shall preside at this meeting until the Council elects its chairman.

Par. 2. Quorum. A quorum shall consist of more than 50% of the voting members of the Council, with representation from at least five Counties.

Section 7. Power To Fill Vacancies

The Council shall have power to fill any vacancy which may occur in any elective office, board, or committee, for which the power to fill such vacancy is not otherwise provided, until the next regular meeting of the House of. Delegates.

Section 8. Policy Initiation Or Commitment

No officer or board or committee or section or employee shall inaugurate or initiate or commit The Society to any policy unless the same has been expressly approved by the House of Delegates or the Council.

ARTICLE VIII — SCIENTIFIC ASSEMBLY

Section 1. Definition

The Scientific Assembly of The Society is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine.

Section 2. Meetings

Par. 1. General. General meetings of the Scientific Assembly shall be held annually. General meetings of the Scientific Assembly shall be arranged by the Council which shall select the persons to preside.

Par. 2. Sections. Sections of the Scientific Assembly may be created or existing sections discontinued in accordance with Section 1 of Article V of these Bylaws. The officers of each section shall be a chairman, a secretary and such other officers as the section may deem advisable, each to be elected by the section during the course of the annual meeting of the Scientific Assembly to serve for one year. Each section shall meet during the course of the annual meeting of the Scientific Assembly and at such other times as the section may deem advisable. The officers of each section shall arrange the program of the meetings of the section in accordance with the rules and regulations of the House of Delegates and the Council. Only Active Members and Life Members of The Society shall vote or hold office in a section of the Scientific Assembly.

Section 3. Registrants

Par. 1. General Meetings. The following shall be permitted to register at any general meeting of the Scientific Assembly subject to rules and regulations of the House of Delegates and the Council:

A) Members of The Society—Active, Associate, Honorary, Life and Student Members.

B) Delegates to The Society from constituent associations of the American Medical Association.

C) Guests invited by the House of Delegates, the Council, The General Manager, general officers or officers of a section.

D) Residents and interns who are certified for registration by the General Manager.

E) Medical students of approved medical schools who are certified for registration by the General Manager.

Par. 2. Section Meetings. Any section may exclude from its meetings all but duly registered members of the section when the section is electing officers or conducting business of the section.

Section 4. Quorum

A quorum at any general meeting or section meeting of the Scientific Assembly shall be those present at a duly called meeting or, in the case of a section, the number or proportion designated by the section.

ARTICLE IX — "CONNECTICUT MEDICINE"

Section 1. Election Of Editor

The Council shall elect an Editor of "Connecticut Medicine" to serve until his successor takes office after election by the Council. The Editor shall serve ex-officio as a member of the Council without the right to vote.

Section 2. Powers And Duties Of Editor

The Editor of "Connecticut Medicine" shall exercise all such powers, shall carry out all such duties. and shall observe all such directions and restrictions as the Council may from time to time impose upon him, but in default thereof, the Editor of "Connecticut Medicine" shall manage and supervise the publication of "Connecticut Medicine" with full responsibility for editorial content, advertising sales, and circulation, as well as approval of all printing and paper contracts for the publication. He shall coordinate his activities with those of the General Manager and the latter's office and to that end, he may utilize employees, equipment and facilities of the Society which are under the General Manager's supervision and which are assigned to his service by the General Manager.

Section 3. Finance

The General Manager periodically shall receive from the Treasurer prorated portions of the fund allocated to the Editor's office and from such funds the General Manager shall make direct payment of all expenditures necessary for the publication of "Connecticut Medicine". The report of such expenditures shall be included in the report of the Treasurer to the House of Delegates at its annual meeting.

ARTICLE X — COMMITTEES OF THE COUNCIL

Section 1. Council Subcommittees

The Council may appoint from time to time ad hoc subcommittees from the membership of the Council to assist in expediting the business of the Council. Such subcommittees shall be discharged by the Council at will. All such subcommittees of the Council shall be discharged automatically upon the adjournment of the annual meeting of the House of Delegates following their creation.

Section 2. Standing Committees Of The Council

Par. 1. Outline. The standing committees of the Council shall be as follows:

A Committee on Arrangements
A Committee on Building Management
A Committee on Employee Pensions and Benefits
A Committee on Investment of Funds
A Committee on Preliminary Study of Censorship Questions
A Committee on Preliminary Study of Nominations

Par. 2. Membership. The members of all standing committees of the Council shall be discharged automatically upon the adjournment of the annual meeting of the House of Delegates following their election.

Par. 3. Committee on Arrangements. The component association of the county in which the annual Scientific Assembly is to be held shall nominate to the Council a Committee on Arrangements. The Council shall elect the committee and the chairman thereof. The Committee on Arrangements shall provide suitable accommodations for general meetings, section meetings and exhibits of the Scientific Assembly. Its chairman shall report an outline of the arrangements to the General Manager for publication in the program.

Par. 4. Committee on Building Management. The Council shall elect a Committee on Building Management which shall make such recommendations to the Council as it deems advisable with respect to the management of The Society's building, offices, grounds, equipment and other property exclusive of funds.

Par. 5. Committee on Employee Pensions and Benefits. The Council shall elect a Committee on Employee Pensions and Benefits which shall make such recommendations to the Council as it deems advisable with respect to salaries, pensions and other insurance arrangements, vacations, overtime, bonuses, working conditions, and similar matters affecting employees of The Society to the end that employee morale as related to such matters shall be maintained at as high a level as feasible.

Par. 6. Committee on Investment of Funds. The Council shall elect a Committee on Investment of Funds which shall make such recommendations to the Council as it deems advisable with respect to the investment of The Society's funds. The Treasurer shall serve ex-officio as chairman of the committee.

Par. 7. Committee on Preliminary Study of Censorship Questions. When the Council receives a question involving the rights and standings of members, in relation to other members or to the component associations or to The Society, or when a question of an ethical nature is referred to the Council from the House of Delegates, or when an appeal is taken to the Council on a question of discipline affecting the conduct of members of component associations, or when a case of claimed malpractice is referred to the Council by the committee on medical ethics and deportment of a component association, the Council shall elect a Committee on Preliminary Study of Censorship Questions which shall study and review such question or appeal or claimed malpractice case and shall report its findings and recommendations to the Council. Once such committee is elected, it shall serve as a standing committee of the Council.

Par. 8. Committee on Preliminary Study of Nominations. The President of The Society and the Councilor from each component association shall be the Committee on Preliminary Study of Nominations. The President shall be the chairman of the committee; in his absence, the President-Elect shall serve as chairman pro tempore and, in the President-Elect's absence, the Vice-President shall serve as chairman pro tempore. In the absence of the Councilor from any component association, the Associate Councilor from that association may serve in his place. The committee shall study the offices and committee memberships elective by the House of Delegates and shall report to the Council its recommendations as to the nominee for each such office or committee. Following this report, the Council shall name a full slate of nominees and shall report its nominations to the first session of each annual meeting of the House of Delegates.

Section 3. Representatives And Advisors

Par. 1. Outline. The Council shall elect the following committees of representatives or advisors.

- Advisory Committee—Cerebral Palsy Association
- Advisory Committee on Medicare Plan and Federal Employee Health Benefits Program
- Advisory Committee to the State Commissioners of Welfare, Finance and Control
- Advisory Committee to Woman's Auxiliary
- Conference Committee with Connecticut Bar Association
- Conference Committee with Connecticut State Dental Association
- Conference Committee with Connecticut Pharmaceutical Association
- Conference Committee for the Improvement of the Care of the Patient
- Delegates to Connecticut Advisory Council on School Health
- Delegates to the Council of New England State Medical Societies
- Delegates to Connecticut Nutrition Council
- Delegates to State Medical Societies and Special Societies
- Representative—Connecticut Advisory Committee on Foods and Drugs
- Representatives to Connecticut Health League

Par. 2. Advisory Committee—Cerebral Palsy Association. The Council shall elect annually an Advisory Committee to the Cerebral Palsy Association to consist of not more than five members and appoint the chairman thereof. The purpose of this committee is to serve in an advisory capacity to the United Cerebral Palsy Association of Connecticut in matters relating to medical affairs.

Par. 3. Advisory Committee on Medicare Plan and Federal Employee Health Benefits Program. The Council shall elect annually an Advisory Committee on Medicare Plan and Federal Employee Health Benefits Program and appoint the chairman thereof. The membership on this committee shall be representative of all of the county associations and the major medical specialties. The purposes of this committee are to cooperate with the Office for Dependents' Medical Care of the Department of Defense and Connecticut Medical Service in the operation of the Dependents' Medical Care Act in Connecticut; supervise the medical professional phases of the Plan in Connecticut; determine appropriate fees for medical services not included in the Connecticut Schedule of Allowances; determine matters of policy within the State jurisdiction; and direct the Plan Coordinator in Connecticut. This committee shall also adjudicate individual allowances for procedures whose fees are determined on an individual consideration basis under the Federal Employees Health Benefits Program.

Par. 4. Advisory Committee to the State Commissioners of Welfare, Finance and Control. The Council shall elect annually an Advisory Committee to the State Commissioners of Welfare, Finance and Control to consist of not less than five members and appoint the chairman thereof. The purposes of this committee shall be to advise and assist the commissioners of welfare, finance and control in all matters concerning the medical care and hospitalization of state beneficiaries and to promote and foster cooperative relations between state employed personnel and all members of the medical profession.

Par. 5. Advisory Committee to Woman's Auxiliary. The Council shall elect annually an Advisory Committee to the Woman's Auxiliary of not less than three members and to appoint the chairman thereof. The purpose of this committee is to serve in an advisory capacity to the Woman's Auxiliary of the State Medical Society in matters of general policy, insofar as they relate to the program of the State Medical Society and, upon request, to confer with the Auxiliary in the development of this program.

Par. 6. Conference Committee with Connecticut Bar Association. The Council shall elect annually a Conference Committee with the Connecticut Bar Association of not less than five members and appoint the chairman thereof. The purpose of this committee is to confer from time to time with representatives of the Connecticut Bar Association on matters of mutual interest to the medical and legal professions.

PAR. 7. CONFERENCE COMMITTEE WITH CONNECTICUT STATE DENTAL ASSOCIATION. The Council shall elect annually a Conference Committee with the Connecticut State Dental Association of not less than five members and appoint the chairman thereof. The purpose of this committee is to confer from time to time with representatives of the Connecticut State Dental Association on problems of mutual interest to the two professions and bring them into closer relationship in all fields.

PAR. 8. CONFERENCE COMMITTEE WITH THE CONNECTICUT PHARMACEUTICAL ASSOCIATION. The Council shall elect annually a Conference Committee with the Connecticut Pharmaceutical Association of not less than five members and appoint the chairman thereof. The purpose of this committee shall be to provide a continuing conference group between the Connecticut State Medical Society and the Connecticut Pharmaceutical Association for the study of mutual problems and for the integration of purposes and objectives common to both professions in Connecticut.

PAR. 9. CONFERENCE COMMITTEE FOR THE IMPROVEMENT OF THE CARE OF THE PATIENT. The Council shall elect annually three representatives and appoint the chairman thereof to serve on a joint committee for the improvement of the care of the patient, which consists of representatives from the State Medical Society, State Nurses' Association, Connecticut League for Nursing, Connecticut Public Health Association and the Connecticut Hospital Association. The purpose of this committee is to study problems of mutual interest to the medical, nursing and hospital administrative professions with a view to improving the care of hospital patients.

PAR. 10. DELEGATES TO CONNECTICUT ADVISORY COUNCIL ON SCHOOL HEALTH. The Council shall elect, in the even numbered years, a delegate and alternate delegate, for a term of two years, to represent The Society on the Connecticut Advisory Council on School Health.

PAR. 11. DELEGATES TO THE COUNCIL OF NEW ENGLAND STATE MEDICAL SOCIETIES. The Council shall elect annually three delegates to the Council of New England State Medical Societies and designate the chairman thereof. The duties of these delegates shall be to represent the Connecticut State Medical Society at meetings of the New England Council and shall, upon direction of the Council or the House of Delegates, cast one unit vote for The Society on all matters calling for such vote. The chairman is charged with the responsibility of maintaining liaison between the two organizations and with preparing and filing a report of the delegates at each annual meeting of The Society.

PAR. 12. DELEGATES TO CONNECTICUT NUTRITION COUNCIL. The Council shall elect annually two delegates to represent The Society on the Connecticut Nutrition Council.

PAR. 13. DELEGATES TO STATE MEDICAL SOCIETIES AND SPECIAL SOCIETIES. The Council shall elect annually two delegates each to the following state societies: Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. The terms of office of these delegates shall be for one year beginning July 1, all except the delegates to New York, whose terms shall expire at the annual meeting of the Connecticut State Medical Society. The Council shall elect annually one delegate each to the Connecticut Hospital Association, the Connecticut Pharmaceutical Association, the Connecticut State Dental Association, and the Connecticut State Nurses Association. The terms of these delegates shall expire at the annual meeting of The Society.

PAR. 14. REPRESENTATIVE—CONNECTICUT ADVISORY COMMITTEE ON FOOD AND DRUGS. The Council shall elect annually one representative to serve on the Connecticut Advisory Committee on Food and Drugs.

PAR. 15. REPRESENTATIVES TO CONNECTICUT HEALTH LEAGUE. The Council shall elect annually one of three representatives to the Connecticut Health League and appoint the chairman thereof. There shall be three representatives to the Connecticut Health League, each of whom shall serve for three years, and shall be elected in such a manner that the terms of one representative shall expire annually.

ARTICLE XI

DIVISIONAL BOARDS AND COMMITTEES

Section 1. Divisions

In order to strengthen various functions of The Society, to minimize overlapping and duplication of work and to provide clear-cut centers of responsibility, related functions of The Society shall be grouped into divisions as follows:

Education and Hospitals Division
Legislation Division
Medical Economics Division
Publications Division
Public Relations Division
Scientific Activities Division
Socio-Environmental Medicine Division

Section 2. Divisional Boards

Each of the divisions of The Society shall be supervised by a divisional board whose members and chairman shall be selected by the House of Delegates from the active membership of The Society. The membership of each divisional board shall include the chairman of each standing committee of that division and such others as the House of Delegates may deem advisable to select. Each divisional board shall submit annually before March first a written report to the Council for transmittal to the House of Delegates and shall make such other reports at other times as requested by the House of Delegates or the Council.

Section 3. Divisional Standing Committees

The standing committees of the divisions of The Society shall consist of Active Members and Life Members of The Society and shall be as follows:

(A) Education and Hospitals Division
  Advisory Committee to the State Board of Examiners for Nursing
  Committee on Cooperation with the Yale School of Medicine
  Committee on Health Careers
  Committee on Hospitals
  Committee on Medical Education and Licensure
  Committee on Postgraduate Education
  Committee on Program of the Scientific Assembly

- Connecticut Committee on American Medical Education Foundation

(B) Legislation Division
- Committee on State Legislation
- Committee on National Legislation

(C) Medical Economics Division
- Committee on Medical Care of Veterans
- Committee on Medical Economics and Insurance
- Committee on Third Party Payments

(D) Publications Division
- Committee on Publications
- Editorial Committee of "Connecticut Medicine"

(E) Public Relations Division
- Committee on County and Local Public Relations
- Committee on State and National Public Relations

(F) Scientific Activities Division
- Cancer Coordinating Committee
- Committee on Aging
- Committee on Eye Care
- Committee on Maternal Morbidity and Mortality
- Committee on Perinatal Morbidity and Mortality
- Committee on State Blood Bank

(G) Socio-Environmental Medicine Division
- Committee on Accident Prevention
- Committee on Mental Health
- Committee on Occupational Health
- Committee on Public Health
- Committee on Rehabilitation
- Committee on Rural Health

Section 4. Organization And Operation Of Boards And Standing Committees

The chairman of each board and standing committee shall be selected by the House of Delegates. Each board and standing committee shall organize and elect its own vice-chairman, secretary and such other officers as it deems advisable. Each board and standing committee shall have the authority to appoint special subcommittees subject to the approval of the Council for any purpose within the functions of the board or standing committee. Each board or standing committee shall make its own rules to govern its action provided such rules do not conflict with the Charter or these Bylaws nor with rules or resolutions of the House of Delegates or of the Council. The Society headquarters shall be the headquarters of all boards and standing committees. Each divisional standing committee shall submit to its divisional board for transmittal to the Council a budget for the fiscal year. A board or a standing committee shall not expend or contract to expend any money in excess of its appropriation without the consent and approval of the Council. Each divisional standing committee shall submit annually at a time set by its divisional board a written report and shall make such other reports at other times as requested by its divisional board.

Section 5. Duties Of Standing Committees

PAR. 1. ADVISORY COMMITTEE TO THE STATE BOARD OF EXAMINERS FOR NURSING. The Council annually shall nominate to the House of Delegates an Advisory Committee to the State Board of Examiners for Nursing to consist of not less than three nor more than five members and shall nominate the chairman thereof. The function of this committee shall be to study the educational, training and legal requirements for practitioners of nursing in the State of Connecticut, to provide information for members of The Society and for the State Board of Examiners for Nursing on these and related matters, and, as occasion arises, to recommend to the Council and the State Board of Examiners for Nursing procedural or statutory changes designed to maintain a high quality of nursing care in Connecticut.

PAR. 2. COMMITTEE ON COOPERATION WITH THE YALE SCHOOL OF MEDICINE. The Council annually shall nominate to the House of Delegates a Committee on Cooperation with the Yale School of Medicine to consist of not less than three nor more than seven members and shall nominate the chairman thereof. The function of the committee shall be to study the educational program of the Yale School of Medicine, to provide information for members of The Society and for the faculty and governing bodies of the Yale School of Medicine on matters related to this subject, and, as occasion arises, to enlist the support of members of The Society in assisting the Yale School of Medicine in its educational program.

PAR. 3. COMMITTEE ON HEALTH CAREERS. The Council annually shall nominate to the House of Delegates a Committee on Health Careers to consist of not less than eight members and shall nominate the chairman thereof. The function of the committee shall be to endeavor to stimulate and encourage youths of Connecticut to enter into the study of medicine and allied health fields through counseling sessions in conjunction with the Woman's Auxiliary and each component association and through the dissemination of verbal and written information and exhibits to students and teachers in secondary schools. The members of the committee shall be selected to represent every component association of The Society.

PAR. 4. COMMITTEE ON HOSPITALS. The Council annually shall nominate to the House of Delegates a Committee on Hospitals to consist of not less than six members and shall nominate the chairman thereof. This committee shall pursue a continuing study of the relations of the medical profession to the operation of public and voluntary hospitals in Connecticut, shall confer with the State Department of Health and the Connecticut Hospital Association on this and related matters and, when indicated, shall make recommendations to the Council for transmittal to the House of Delegates, the State Department of Health, or the Connecticut Hospital Association.

PAR. 5. COMMITTEE ON MEDICAL EDUCATION AND LICENSURE. The Council annually shall nominate to the House of Delegates an active member of The Society to be proposed to the Governor of the State of Connecticut for appointment as a member of the Connecticut Medical Examining Board for a term of five years. On or about December first of each year, the General Manager of The Society shall prepare for the signature of the President of The Society a statement informing the Governor of The Society's choice of an active member to be appointed as a member of the Connecticut Medical Examining Board and the President shall cause the signed statement to be delivered to the Governor. When a vacancy occurs on the Connecticut Medical Examining Board and when it is not practical for the appointment to be made by the House of Delegates, the President shall propose to the Governor an active member of The Society for appointment.

The Connecticut Medical Examining Board shall constitute The Society's Committee on Medical Education and Licensure and the President of that Board as elected by its members shall be the chairman of the Society's Committee on Medical Education and Licensure. The function of the committee shall be to study the educational and legal requirements for practitioners of medicine in the State of Connecticut, to provide information for the members of The Society on these and related matters, and, when indicated, to recommend to The Society amendments to the statutes designed to maintain a high quality of medical care in Connecticut.

PAR. 6. COMMITTEE ON POSTGRADUATE EDUCATION. The Council annually shall nominate to the House of Delegates a Committee on Postgraduate Education to consist of not less than seven members and shall nominate the chairman thereof. The function of the committee shall be to plan and make available programs of postgraduate education for members of The Society, to arrange and conduct the Clinical Congress of The Society, and to cooperate with university and other agencies within the state for the extension of postgraduate education of physicians.

PAR. 7. COMMITTEE ON PROGRAM OF THE SCIENTIFIC ASSEMBLY. The Council annually shall nominate to the House of Delegates one member of the Committee on Program of Scientific Assembly for a term of three years. The program committee shall consist of three members, each serving for a term of three years, and the chairman shall be the member who is serving the final year of his term of office. The function of the committee shall be to arrange the program of the annual meeting of the Scientific Assembly and to submit such program to the General Manager for publication not less than two months preceding the date of the annual meeting of the Scientific Assembly.

PAR. 8. CONNECTICUT COMMITTEE ON AMERICAN MEDICAL EDUCATION FOUNDATION (AMEF). Each component association shall name a Committee on American Medical Education Foundation, the chairman of which shall be an Active Member of The Society, and the chairman of each such committee, by virtue of his office, shall automatically be a member of the Connecticut Committee on American Medical Education Foundation. In addition to these eight members, the Council annually shall nominate to the House of Delegates an active member of The Society to be chairman of the Connecticut Committee on American Medical Education Foundation. The function of the committee shall be to disseminate information concerning the American Medical Education Foundation, to encourage members of The Society to contribute annually to the AMEF, to inform The Society about the generosity of members of The Society relative to other groups and, when indicated, to make recommendations to The Society on these and related matters.

PAR. 9. COMMITTEE ON STATE LEGISLATION. Annually, before the fifteenth of January, each component association shall send to the General Manager of The Society its nomination of an Active Member of The Society to membership on the Committee on State Legislation. The Council annually shall transmit these nominations to the House of Delegates and, in addition to these eight nominees, the Council shall nominate to membership on the committee the Delegates to the American Medical Association and shall nominate the chairman of the committee. The function of the committee shall be to study and review proposed state legislation pertaining to the public health and the practice of the healing arts, to consult with The Society's legislative agent and to advise him of the opinion of The Society on proposed or pending legislation, to draft and have introduced into the Connecticut General Assembly appropriate legislation for improving medical care and public health in the state, to advise members of The Society concerning proposed state legislation and to supervise and direct The Society's program with respect to state legislation.

PAR. 10. COMMITTEE ON NATIONAL LEGISLATION. The Council annually shall nominate to the House of Delegates a Committee on National Legislation to consist of not less than seven members and shall nominate the chairman thereof. The chairman of the Committee on State Legislation and the Delegates to the American Medical Association shall serve ex-officio as members of the committee with all rights and privileges. The function of the committee shall be to study and review proposed national legislation pertaining to the public health and the practice of the healing arts, to consult with The Society's legislative agent and to advise him of the opinion of The Society on proposed or pending legislation, to draft and have introduced into the United States Congress appropriate legislation for improving medical care and public health in the nation, to advise members of The Society concerning proposed national legislation and to supervise and direct The Society's program with respect to national legislation.

PAR. 11. COMMITTEE ON MEDICAL CARE OF VETERANS. The Council annually shall nominate to the House of Delegates a Committee on Medical Care of Veterans to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The Committee on Medical Care of Veterans shall be the representative of The Society in all matters pertaining to the medical care of veterans. It shall confer from time to time with agencies concerned with the medical care of veterans, it shall inform The Society concerning the medical care of veterans in this state and related matters and, when indicated, shall recommend to the Council such procedural or statutory changes as it deems advisable.

PAR. 12. COMMITTEE ON MEDICAL ECONOMICS AND INSURANCE. Annually each component association shall nominate to the Council for transmittal to the House of Delegates an Active Member of The Society to serve as a member of the Committee on Medical Economics and Insurance. In addition to these eight nominees, the Council shall nominate not less than three nor more than five members of the committee and shall nominate the chairman thereof. The function of the committee shall be to study any and all of the business aspects of the practice of medicine wherein The Society can be of assistance to its members, to study and review insurance and protective plans designed to protect members of The Society and their families against the hazards of illness or disability, to advise members of The Society concerning these and related matters and, when indicated, recommend to the Council programs of potential benefit to members of The Society which can be inaugurated or endorsed.

PAR. 13. COMMITTEE ON THIRD PARTY PAYMENTS. The Council annually shall nominate to the House of Delegates a Committee on Third Party Payments to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to study existing and projected systems which provide payment for physicians' services by any public, private or cooperative agency, and to advise The Society concerning them. In its operations, the committee shall confer directly with agencies which have an interest and responsibility in systems that involve payment of physicians by third party agencies but, where other standing committees of The Society have direct relationships such as those of the Liaison Committee with CMS or the Committee on Medical Care of Veterans, the committee shall confer with such other standing committees rather than directly with the agencies involved. The committee shall also maintain active liaison with committees on third party payments of the component associations.

PAR. 14. COMMITTEE ON PUBLICATIONS. The Council annually shall nominate to the House of Delegates a Committee on Publications to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The function of the committee shall be to provide assistance and guidance to the General Manager and his staff concerning all publications of The Society except "Connecticut Medicine". The committee shall not be concerned directly with the business or financial aspects of such publications, which aspects are the responsibility of the General Manager. The committee shall maintain close liaison with the Public Relations Division.

PAR. 15. EDITORIAL COMMITTEE OF "CONNECTICUT MEDICINE". The Council annually shall nominate to the House of Delegates an Editorial Committee of "Connecticut Medicine" consisting of not more than fifteen members in addition to the Editor and the President who shall serve ex-officio as members with all rights and privileges. The Editor shall serve as chairman of the Editorial Committee. The members of the committee insofar as feasible shall be capable of representing the various specialty divisions of medicine and the various geographic areas of the state. The function of the committee shall be to assist and guide the Editor in the acceptance or rejection of manuscripts for publication and to assist the Editor to maintain a high literary quality in "Connecticut Medicine". The committee shall not be concerned with the business or financial aspects of the publication of "Connecticut Medicine", which aspects are the responsibility of the Editor and the General Manager.

PAR. 16. COMMITTEE ON COUNTY AND LOCAL PUBLIC RELATIONS. Annually each component association shall nominate to the Council an Active Member of The Society to serve on the Committee on County and Local Public Relations. In addition to these eight nominees, the Council annually shall nominate to the House of Delegates not less than one nor more than five members and shall nominate the chairman of the committee. The function of the committee shall be to assist the committees on public relations of the component associations in developing and disseminating accurate and reliable information concerning matters of public interest in the field of medicine. The committee shall use its efforts to encourage cooperation by the committees on public relations of the component associations with local medical societies, allied professional groups, voluntary agencies, the press, radio, television and other groups within the respective counties in a program of public relations.

PAR. 17. COMMITTEE ON STATE AND NATIONAL PUBLIC RELATIONS. The Council annually shall nominate to the House of Delegates a Committee on State and National Public Relations to consist of eight members and shall nominate the chairman thereof. The function of the committee shall be to inquire into and pass upon such phases of public information as deal with the care of the sick and the practice of medicine, to keep the people of Connecticut accurately and reliably informed concerning matters of public interest in the field of medicine, to encourage cordial relations and understanding with communications media, and to cooperate with other committees of The Society and of the American Medical Association in a program of public relations.

PAR. 18. CANCER COORDINATING COMMITTEE. The Council annually shall nominate to the House of Delegates a Cancer Coordinating Committee. The membership of the committee shall include a chairman, one member from the cancer committee of each general hospital in Connecticut, and shall at all times include the President of the Connecticut Cancer Society and a representative of the State Department of Health. This Committee shall be governed by an Executive Committee designated by the Council, which shall include the chairman, President of the Connecticut Cancer Society, the representative of the State Department of Health, and six members selected from the other membership of the Committee. The purpose of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study, prevention and treatment of cancer in Connecticut, to aid and encourage the establishment and maintenance of high professional standards in the cancer clinics of the general hospitals, and to organize and promote professional education regarding cancer in Connecticut.

PAR. 19. COMMITTEE ON AGING. The Council annually shall nominate to the House of Delegates a Committee on Aging to consist of not less than five nor more than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of various agencies whose functions may include some phase of the study of the aging processes or the care of the aged, to cooperate with other committees of The Society in the phases of their activities related to aging or the care of the aged, to cooperate with committees of the American Medical Association concerned with this matter, to maintain liaison regarding health problems of the aging with the Connecticut State Dental Society, the Connecticut Hospital Association, the Connecticut Association of Chronic and Convalescent Hospitals and similar organizations, and to develop and make available to members of The Society and all other persons interested in the problems of aging and the care of the aged information on all phases of these and related matters. When indicated, the committee shall recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, statutory changes which the Committee on Aging deems advisable to promote improvements in the care of the aging and aged.

PAR. 20. COMMITTEE ON EYE CARE. The Council annually shall nominate to the House of Delegates a Committee on Eye Care to consist of not more than fifteen members and shall nominate the chairman thereof. The membership of the committee shall include not less than four but not more than seven members of the Executive Committee of the Eye, Ear, Nose and Throat Section of the Scientific Assembly and shall include the advisors from The Society to the Public Relations Committee of the Section on Ophthalmology of the American Medical Association. The function of the committee shall be to coordinate and integrate the efforts of various agencies whose functions may include some phase of eye care, to cooperate with other committees of The Society in the eye care phases of their activities, to cooperate with committees of the American Medical Association concerned with the promotion of eye care, to develop and disseminate to members of The Society and other interested persons information on various phases of eye care and, when indicated, recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, statutory changes designed to promote improvements in eye care within the state.

Par. 21. Committee on Maternal Morbidity and Mortality. The Council annually shall nominate to the House of Delegates a Committee on Maternal Morbidity and Mortality to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of maternal morbidity and mortality in Connecticut, to aid and encourage the establishment and maintenance of high professional standards in prenatal and obstetrical care, and to organize and promote professional education in these and related matters in Connecticut.

Par. 22. Committee on Perinatal Morbidity and Mortality. The Council annually shall nominate to the House of Delegates a Committee on Perinatal Morbidity and Mortality to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of perinatal morbidity and mortality in Connecticut, to aid and encourage the establishment of high professional standards among those concerned with perinatal care and treatment, to organize and promote professional education in these and related matters in Connecticut, to encourage every hospital in Connecticut where maternity and newborn service is a functioning part of the staff activities to have an active committee on perinatal morbidity and mortality and to encourage component associations in the development of committees which can help in a consultative manner to correlate the study of perinatal morbidity and mortality in the hospitals in their areas.

Par. 23. Committee on State Blood Bank. The Council annually shall nominate to the House of Delegates a Committee on State Blood Bank to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to promote the development and maintenance of a statewide blood bank system operating in the interests of the public and the medical profession, to cooperate with the State Department of Health and with other agencies in encouraging the establishment and maintenance of high professional standards in the operation of blood banks and to organize and promote professional education in Connecticut regarding the blood program and related matters.

Par. 24. Committee on Accident Prevention. The Council annually shall nominate to the House of Delegates a Committee on Accident Prevention to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies concerned with the study and prevention of accidents in Connecticut, to develop and implement standards for medical qualifications of vehicle operators, to encourage members of The Society to serve as consultants to various safety committees and groups, to encourage and assist the component associations in the development of liaison with community safety committees and councils, to cooperate with national and regional groups whose functions may include some phase of medical aspects of accident prevention and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, proposed statutory acts or amendments which it deems advisable.

Par. 25. Committee on Mental Health. The Council annually shall nominate to the House of Delegates two members to serve on a Committee on Mental Health and shall nominate the chairman thereof. The committee shall consist of not more than eight members, each of whom shall serve for four years, and shall be nominated in such a manner that the terms of two members shall expire annually. The function of the committee shall be continually to study the provisions for the care of the mentally ill in Connecticut and those addicted to the use of habit-forming drugs and alcohol for the purpose of making information on these subjects available to members of The Society, to confer from time to time with the Connecticut Department of Mental Health and other mental health agencies, to organize and promote psychiatric specialties and, when indicated, to recommend to the Council for transmittal to the Committee on State Legislation for its consideration, proposed statutory acts or amendments which it deems advisable.

Par. 26. Committee on Occupational Health. The Council annually shall nominate to the House of Delegates a Committee on Occupational Health to consist of not less than ten members and shall nominate the chairman thereof. The function of the committee shall be to exercise leadership in developing and improving occupational health services to all employees including those in small establishments, to bring to the attention of employers and employees the values of occupational health services, to attract and guide physicians in private practice in rendering part-time or consultant occupational health services, to assist the component associations in the development of occupational health programs and in helping employers locate physicians willing and qualified to direct and serve occupational health programs, to aid and encourage the establishment and maintenance of high professional standards among all practitioners concerned with any phase of occupational health, to organize and promote professional education in occupational medicine in Connecticut and to review and advise the Committee on State Legislation and the Committee on National Legislation concerning proposed legislation pertaining to occupational health.

Par. 27. Committee on Public Health. The Council annually shall nominate to the House of Delegates a Committee on Public Health to consist of one member from each component association and such additional members as it may deem advisable and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies in Connecticut concerned with public health, sanitation and the prevention of communicable diseases, to serve as liaison between The Society and the Connecticut State Department of Health and other official public health agencies, to aid and encourage the establishment of high professional standards in public health practice, to disseminate to all physicians information useful in the prevention of disease, to organize and promote professional education on preventive medicine in Connecticut and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, regulatory or statutory changes which it deems desirable to protect and promote the public health within the state.

Par. 28. Committee on Rehabilitation. The Council annually shall nominate to the House of Delegates a Committee on Rehabilitation to consist of not less than seven members and shall nominate the chairman thereof. The committee shall include at least one member from each of the following committees: Committee on Hospitals, Committee on State Legislation, Committee on Aging, Committee on Mental Health, Committee on Occupational Health and Committee on Public Health. The function of the committee shall be to assist in the coordination of medical, psychological, social, educational and vocational resources of the state in the development of effective rehabilitation programs, to acquaint members of The Society with the magnitude of the rehabilitation problem from the standpoint of the patients' needs and the opportunities available to physicians to help in the rehabilitation of their patients, to study and disseminate information on techniques useful in the organization of medical and other phases of rehabilitation at the community level, to organize and promote professional education regarding rehabilitation techniques, to cooperate with component associations of The Society and the American Medical Association whose functions may include some phase of rehabilitation and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, legislative enactments designed to promote improvements in the rehabilitation effort.

Par. 29. Committee on Rural Health. The Council annually shall nominate to the House of Delegates a Committee on Rural Health to consist of not less than five members and shall nominate the chairman thereof. The function of the committee shall be to coordinate and integrate the efforts of the various agencies in Connecticut whose functions may include some activities applicable to the problems of rural health, to interest and encourage physicians in rural medical practice, to organize and promote health education programs and self-help programs, to confer with state and local public health agencies regarding services for rural areas, to gather and disseminate information concerning the prevention of rural occupational health disorders, to provide communities with how-to-do-it information which will assist in coordinating the activities of rural organizations and physicians and, when indicated, to recommend to the Council, for transmittal to the Committee on State Legislation for its consideration, legislative enactments designed to promote improvements in rural health within the state.

ARTICLE XII — DUES

Section 1. Prescription

Annual dues for Active Members shall be prescribed for the ensuing calendar year in an amount recommended by the Council and approved by the House of Delegates and shall be an equal per capita assessment upon each Active Member except that physicians who become Active Members during the latter half of a fiscal year will be assessed one-half of the annual dues for that fiscal year.

Section 2. Publications

Membership dues shall include subscriptions to "Connecticut Medicine" and such other publications of The Society as are intended for distribution to all Active Members.

Section 3. Exemptions

The dues of any member may be remitted by vote of the Council on recommendation of a Councilor or Associate Councilor elected by the respective component association provided there has been prior remission of dues by that association. Honorary Members, Life Members, Associate Members and Student Members shall not be subject to assessment of dues but may be charged for subscriptions to publications, registration fees at scientific sessions, and the like.

Section 4. Delinquency

An Active Member is delinquent if his dues are not paid by August first of the year for which dues are prescribed and shall forfeit his active membership in The Society if he fails to pay the delinquent dues within thirty days after notice of his delinquency has been mailed to his last known address by the General Manager of The Society. Active Members of The Society who have been dropped from the active membership roll for nonpayment of dues cannot be reinstated until such indebtedness has been discharged, but such indebtedness shall apply only to the one fiscal year of delinquency.

ARTICLE XIII — FUNDS AND EXPENSES

Section 1. Fiscal Year

The fiscal year of The Society shall commence on January first and terminate on December thirty-first of each year.

Section 2. Deposit Of Funds

All funds of The Society shall be deposited promptly upon receipt in a state or national bank.

Section 3. Budget

The annual budget of The Society for each fiscal year shall be prepared by the Counicl and shall be presented by the Treasurer to the House of Delegates for approval. The per capita assessment of dues and any other assessments for the ensuing fiscal year shall be recommended by the Council and shall be transmitted by the Treasurer to the House of Delegates for approval. No request or resolution appropriating funds of The Society shall be considered by the House of Delegates unless the Council has made prior review of such request or resolution and has transmitted recommendation thereon to the House of Delegates.

Section 4. Fidelity Bonds

All officers of The Society and other persons responsible for the receipt, custody and disbursement of Society funds shall be bonded at the expense of The Society by such fidelity bonds as the Council shall prescribe.

ARTICLE XIV — COMPONENT ASSOCIATIONS

Section 1. Definition

The County Medical Associations in Fairfield, Hartford, Litchfield, Middlesex, New Haven, New London, Tolland, and Windham Counties now in operation and in affiliation with The Connecticut State Medical Society shall be the component county associations, of The Society.

Section 2. Function

The function of the component medical associations shall be to bring together into one organization the physicians of each county and these associations shall be united for the purpose of organizing the medical profession in the State of Connecticut as provided in Article II of these Bylaws.

Section 3. Eligibility For Membership

Requirements for eligibility for membership in a component association shall be those determined by that association provided such requirements do not conflict with the Charter or Bylaws of The Society or with the Constitution or Bylaws of the American Medical Association.

Section 4. Transfer Of Component Association Membership

A member of a component association of The Society who removes his residence to another county within this state and who wishes to transfer his membership to the component association in the county of his new residence may do so upon the presentation of a certificate signed by the Secretary of the component association of which he is a member. This certificate shall state that he is a member in good standing in the component association in the county where he previously resided and that his financial obligations to that association for the current year have been paid. The certificate shall be accompanied by a regular application for membership. The component association in the county of his new residence shall add him to the rolls of that association without formality and without charging any dues for the remainder of the year of his transfer.

Section 5. Transfer From Another State Society

A member of a state medical society in another state, that is a component of the American Medical Association, wishing to transfer his membership to a component association of The Society shall present to the Secretary of the component association of The Society in which he is seeking membership a certificate from the Secretary of the county or state medical society of his previous residence. This certificate shall state that he is a member in good standing in that county or state medical association. This certificate and a properly completed application for membership shall be forwarded to the Board of Censors or Credentials Committee of the component association in this state in which he is seeking membership and that Board of Censors or Committee on Credentials may recommend his election at the next meeting of the component association subject to membership eligibility rules of that component association.

Section 6. Membership Roster

The Secretary of each component association shall keep an individual record of the members of that association, and this record shall include the full name, address, college degrees with year, medical schools attended with school and year of graduation, hospital affiliations, type of special practice, if any, and the date of registration in this state. Notations shall also be made concerning transfer and termination of membership.

Section 7. Discipline

Any member of a component association who is aggrieved by disciplinary action of the component association of which he is a member shall have the privilege of appealing to the Council of The Society which shall review the charges made against the disciplined member and the findings therein and render a decision concerning the disciplinary action taken; this shall be final.

Section 8. Termination Of Membership

When membership in a component association terminates for any cause, membership in the Connecticut State Medical Society shall be terminated automatically as of the same date.

Section 9. Dues

Any component association may, at its option, collect the annual dues assessed by The Society in conformity with regulations established by the Treasurer of The Society. Bills for these dues shall be rendered to all members immediately following January 1 of each year and the component association shall forward all monies so collected on behalf of The Society to the Treasurer of The Society quarterly and at such other times as the Treasurer may direct and they shall accompany all payments with a report on a form to be provided by the Treasurer. If a component association does not elect to collect the annual dues assessed by The Society as provided above, the Treasurer of The Society shall collect the annual dues assessed by The Society from the members of that component association and collect also the dues assessed by that county association. In that event, the Treasurer of The Society shall remit to the component association periodically all monies collected on behalf of that association and shall file an accounting of all component association assessments so collected for the year just closed with the component association before the 15th of January of each year.

Section 10. Bylaws

The component associations shall have the power to adopt only such bylaws as are not in conflict with the Bylaws of The Connecticut State Medical Society. In the event of an existing or apparent conflict, the Bylaws of The Society shall take precedence over those of a component association.

ARTICLE XV — AMENDMENTS TO BYLAWS

Section 1. Action

The Bylaws of The Society may be amended by a majority vote of the total number of the voting members of the House of Delegates.

Section 2. Procedure

Proposed amendments to the Bylaws shall be submitted to a meeting of the House of Delegates and shall immediately be placed upon the table without discussion. Such amendments shall lie upon the table until the next regular meeting of the House of Delegates and shall be published in CONNECTICUT MEDICINE on one or more occasions prior to that next meeting and shall be published in the call to that meeting, at which meeting the amendments shall be taken off the table and acted upon by the House of Delegates.

ARTICLE XVI — PARLIAMENTARY PROCEDURE

Section 1. Rules Of Order

In all matters of parliamentary procedure, the Society shall be governed by the most recent edition of Roberts Rules of Orders (Revised).

Section 2. Enablement Clause

The adoption of these Bylaws rescinds and revokes all previous Bylaws of The Society and supersedes their operation.

COUNCIL MEETING

Wednesday, October 11, 1961

A meeting of the Council was called to order by the Chairman, Dr. Gilman, at 3:00 P.M. on Wednesday, October 11, 1961. Present in addition to the Chairman were Drs. Feeney, Deming, Hess, O'Connor, Caplan, Cullen, Gardner, Scully, Wilson, Bradley, Grant, Rentsch, Murray, Jr., Martin, Gevalt, Egan, Davis, Phillips, Hastings, Chartier. Also present: Mrs. Lindquist, Mr. Burch, and Dr. Richards. Absent were: Drs. Goldberg, Ogden, Cornwell, Katzin, Purnell, Gorman.

MINUTES. It was VOTED to approve the minutes of the meeting of September 7, 1961, as printed.

REPORT ON AMA WORKSHOP ON RELATIVE VALUE TECHNIQUES. Having received a printed report on the proceedings of this Workshop from Mr. Roscoe Edlund of Rogers, Slade and Hill, who attended for the Society, the Council VOTED to publish the report in Connecticut Medicine for the information of all members. It was further VOTED to seek legal advice on certain aspects of Relative Value studies, particularly with reference to anti-trust implications under Connecticut and inter-state law.

EXEMPTION FROM DUES. It was VOTED to exempt from payment of 1961 dues, Martin L. Pilot, New Haven, for reasons of postgraduate education. Dr. Pilot will be asked to request renewal of this exemption on an annual basis during the period of his training.

COMMITTEE SERVICE QUESTIONNAIRE. The Managing Editor of Connecticut Medicine reported that approximately 150 questionnaires had been returned to date and that these would shortly be reviewed and processed in such a way that county associations and the Council's nominating committee would have access to lists of members who are interested in serving on county and state committees. The cost of this project was $130 and, upon Dr. O'Connor's recommendation, it was VOTED to pay this amount out of general funds.

JOINT CONFERENCE COMMITTEE WITH THE PHARMACEUTICAL ASSOCIATION. It was VOTED to accept with regret the resignation of Fritz M. Meyer, Bridgeport, as a member of this Committee and as chairman of the Society's component. It was further VOTED to direct the Chairman of the Council and the General Manager to collaborate in appointing a new chairman of the Society's representatives to complete Dr. Meyer's unexpired term.

COMMITTEE ON PUBLIC HEALTH. Upon recommendation of this Committee, it was VOTED to adopt the following Resolution:

WHEREAS: Dr. Joseph L. Hetzel, Waterbury, has retired as Chairman of the Advisory Committee on School Health after many years of faithful service, and

WHEREAS: Dr. Hetzel conducted several state meetings on different phases of school health which were attended by Teachers, Doctors, Principals and others interested in bettering the health of school children, and

WHEREAS: Dr. Hetzel, as Chairman, has been a vital and active leader, therefore be it

RESOLVED: That the Council of the Connecticut State Medical Society express its thanks and deep appreciation to Dr. Hetzel for the outstanding service he has rendered to the Connecticut State Medical Society and the citizens of Connecticut.

COMMITTEE ON POSTGRADUATE EDUCATION. This Committee recommended that the 1962 Clinical Congress be held at Yale University School of Medicine on September 28-29, an afternoon session on Friday, September 28 and a morning session on Saturday, September 29. It was VOTED to give general approval to the Committee's recommendations, except that the Council recommends the Clinical Congress be confined to a one day program and that every effort be made to choose a date which will not conflict with other meetings, especially those of the constituent county medical associations.

NAUGATUCK VALLEY MEDICAL SOCIETY. In replies to a request from the NVMS that closer liaison be sought between local societies and the state and county components of the American Medical Association, it was VOTED that the General Manager attempt to comply with the intent of this request by transmitting to local (city and area) organizations information and materials which, in his judgment, would be of interest to the officers and members of those groups. It was pointed out, however, that our goal should be to bring physicians together into one organization rather than to foster their dividing up into autonomous separate groups.

COMMITTEE TO STUDY PERINATAL MORBIDITY AND MORTALITY. Roswell D. Johnson, New Britain, Chairman of this Committee, submitted his resignation as a member of the Committee and as its Chairman. It was VOTED to accept with regret Dr. Johnson's resignation. It was further VOTED to appoint a member of the Committee, Charles A. Murphy, Stamford, as Chairman to complete Dr. Johnson's unexpired term.

CONNECTICUT MEDICAL SERVICE, INC. There was considerable informal discussion among members of the Council as to certain matters which the CMS Board of Directors is said to have under consideration at the present time. There was no official business to consider under this item, and no actions were called for or taken.

CIVIL DEFENSE AND DISASTER PLANNING. Correspondence between Marcel Thau, Hartford, the Board of Directors of the Hartford County Medical Association and the City Manager of Hartford was presented. The essence of this correspondence concerns certain recommendations made by Dr. Thau to the Hartford City Manager relative to the possible undertaking of major constructional revisions of the City of Hartford which might afford protection of people against the hazards of radiation and nuclear fallout. It was VOTED to accept this correspondence as information. As indicated at its last meeting, the Council is interested in all aspects of Civil Defense planning and has initiated steps which will help to bring the medical profession into closer contact with such planning and increase their participation in it.

LETTER FROM THE CONNECTICUT SOCIETY OF CERTIFIED PUBLIC ACCOUNTANTS. The Council was apprised that the Connecticut Society of Certified Public Accountants had recently adopted unanimously a Resolution opposing Section 9-167a of the General Statutes of the State of Connecticut which provides for mandatory representation of political minorities on all state boards. The Council VOTED to endorse the position of the CPA's in this matter which is the opinion that "partisan politics have no place in professional regulatory or examining boards." It was further VOTED to transmit this endorsement to the Society's Committee on State Legislation with the recommendation that the Committee consult with its legislative agent on the matter and take appropriate action thereon at the next session of the General Assembly.

APPOINTMENT OF THE BUDGET COMMITTEE FOR THE 1962 BUDGET. It was VOTED to appoint the 1962 Budget Committee as follows: Isadore S. Goldberg, Torrington, Chairman; Clyde L. Deming, New Haven; Stevens J. Martin, Hartford; E. Tremain Bradley, South Norwalk; Clifford E. Wilson, Norwich.

COMMITTEE ON PUBLIC RELATIONS. On a request for Council opinion on the desirability of a "Physician Award for Community Service" program for the Society, it was VOTED (11-7) to request the Committee on Public Relations to work out a detailed program of this nature and submit it to the Council for evaluation when completed.

1962 ANNUAL MEETING. The General Manager reported that, as directed by the Council, Mrs. Lindquist and he had met with the Program Committee to review past experience with annual meetings and to recommend ways in which the event could be improved. Drs. Feeney, Deming, Hess had also participated in the meeting with the Committee. It was VOTED to hold the two day scientific portion of the program in conjunction with the annual meeting of the House of Delegates, and to hold the entire affair at the Hotel Statler in Hartford on May 2-3-4, 1962.

Various other recommendations were presented which the Committee felt might enhance the social aspects of the meeting and, after considerable discussion of these recommendations, it was VOTED to authorize the Program Committee and members of the office staff to proceed to develop the 1962 Annual Meeting along the lines suggested by the Committee.

COMMITTEE ON PUBLIC HEALTH (ADVISORY COMMITTEE ON NUTRITION). Having been taken off the table at the Council meeting of September 7th, a letter to the Secretary of HEW regarding nutrition (drafted by the Advisory Committee on Nutrition) was evaluated again. The letter was thought to be proper in intent but not in form, and it was VOTED to refer the letter back to the Advisory Committee for revision.

REPORT OF SUBCOMMITTEE TO STUDY AND REVISE THE BYLAWS. William J. Murray, Jr., Chairman, reported on recommendations of the Subcommittee to further amend the Bylaws as submitted to, but not acted upon, by the House of Delegates on April 25, 1961. Following an item by item adoption of the Subcommittee's recommendations, with further amendment in some instances, it was VOTED to adopt the Subcommittee's report; to publish the complete report in the November issue of Connecticut Medicine; to transmit the report to the House of Delegates for consideration and action on December 7, 1961; and to recommend that the new Bylaws, if adopted by the House, become effective at 8:00 A.M. on the day of the 1962 Annual Meeting of the House of Delegates. It was further VOTED to thank the members of the Subcommittee for a job well done. The proposed Bylaw revisions appear as the first item under "From the General Manager's Office" in this issue of Connecticut Medicine.

ELECTION OF STUDENT MEMBERS. Twenty-four candidates were elected to student membership. List follows these minutes.

REPORT ON JOINT RECOMMENDATIONS OF COMMITTEES ON MEDICARE PLAN AND THIRD PARTY PAYMENTS. Having studied this Report, the Council was not clear on several points and it was VOTED to refer the report back to the Committees for clarification and re-submission to the Council.

EXEMPTION FROM DUES. It was VOTED to exempt from payment of 1962 dues, Francis A. Malyszka, Bridgeport, for reasons of postgraduate education. Dr. Malyszka will be asked to request renewal of this exemption annually during the period of his training.

CONNECTICUT SOCIETY FOR CRIPPLED CHILDREN AND ADULTS, INC. Mr. Arthur L. DuBrow, Assistant Executive Director of CSCCA, requested that the Council authorize the Society's Committee on Rehabilitation to establish liaison with his organization for purposes of familiarizing the Committee and the membership of the Society with the facilities for rehabilitation available through the CSCCA, and making possible joint discussions of matters of mutual interest. It was VOTED to authorize the Committee on Rehabilitation to establish such liaison.

COMMITTEE ON PUBLIC HEALTH. It was VOTED to accept the resignation of Frederick J. Christie, Greenwich, as a member of this Committee, and it was further VOTED to appoint Max Caplan, Meriden, to membership on the Committee to complete the unexpired term of Dr. Christie.

DATE OF NEXT MEETING. It was VOTED to hold the next Council meeting on Thursday, November 16, 1961.

1962 AMA Dues

Attention of members is called to an increase in American Medical Association dues, voted by the AMA House of Delegates at the June, 1961 meeting in New York. As of January 1, 1962, AMA dues will be $35 a year instead of $25 as at present. The reasons for the increase were outlined at length in the July 10th issue of "AMA News".

Student Members Elected

Michael L. J. Apuzzo, North Haven
Boston University — Class of 1965

Harlow K. H. Brodie, New Canaan
Columbia University — Class of 1965

Frederick M. Burkle, Jr., Hamden
University of Vermont — Class of 1965

David G. Campbell, West Hartford
Yale University — Class of 1965

Charles W. Casella, Naugatuck
Harvard College — Class of 1965

Morris L. Clark, Jr., Danbury
Tufts University — Class of 1965

Edward L. DuBrow, Hartford
Harvard Medical School — Class of 1965

Michael S. Golub, Bloomfield
Tufts University — Class of 1965

Richard E. Greenberg, New Haven
Tufts University — Class of 1965

Douglas M. Griswold, Greenwich
Boston University — Class of 1965

Neil J. Karlin, Waterbury
Tufts University — Class of 1965

George B. Longstreth, III, Fairfield
Columbia University — Class of 1965

Rosalie J. Meissner, Newington
Boston University — Class of 1965

Daniel A. Myerson, West Hartford
Columbia University — Class of 1965

Paul J. Myerson, West Hartforl
Columbia University — Class of 1965

Edward J. Quinn, New Haven
Jefferson Medical College — 1965

Daniel J. Rowe, Stratford
Seton Hall — Class of 1965

Stephen R. Ryter, New Haven
University of Pittsburgh — Class of 1965

John C. Santos, III, Stonington
University of Rochester — Class of 1965

Alan L. Saroff, Stamford
S.U.N.Y. Upstate Center —Class of 1965

John F. Schilke, Unionville
Yale University — Class of 1965

Donald W. Smilovitz, Fairfield
Seton Hall — Class of 1965

Bruce R. Bendel, Hamden
New York Medical College — Class of 1965

Allan R. Chasnoff, New Haven
Stanford School of Medicine — Class of 1965

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Letter From Medicare Plan

September 26, 1961

William R. Richards, M.D.
General Manager
Connecticut State Medical Society
160 St. Ronan Street
New Haven 11, Connecticut

Dear Doctor Richards:

The retention of certain servicemen beyond their normal date of expiration of active duty tours is essential in order that the augmentation of the Uniformed Services, called for by the President, can be attained. Implementation poses many problems. Among them is the valid identification of the extendees' dependents who will remain eligible for certain benefits while their sponsors remain on active duty.

The extension of tours of duty may result in some dependents being without a valid Identification Card for some time. The basis of identification of dependents is, as you know, the Uniformed Services Identification and Privilege Card (DD Form 1173). Each card carries an expiration date of eligibility. This date, in the case of dependents of noncareer personnel, is the same as the expected expiration date of the sponsor's tour of active duty.

In the past, the "expiration date" on the ID Card has been the governing factor in determining that eligibility still exists. Since the involuntary extension of the tours of duty of many servicemen is effective almost immediately, the probability exists that some still-eligible dependent wives and children may apply for civilian medical care to which they are still entitled. They may not, however, have in their possession the required proof of their eligibility.

No change is contemplated in the provision of our contract which states that claims may not be processed for payment until the dependents have proven their eligibility to receive care. Service personnel are being advised that it is their responsibility to take necessary action to "up-date" the evidence of dependents eligibility.

It is most probable, however, that some dependents will be in need of authorized medical care from civilian sources prior to the time this action has been completed. In such cases, the dependent has been instructed to explain the situation to the physician and hospital authorities. They have been advised to present, if available, some tangible evidence such as allotment checks, official orders, directives, or personal letters which state the pertinent facts to the physician or hospital to help support the dependent's claim of continued eligibility.

This office is not empowered to broaden the "good faith" aspect of our contract. The number of dependents temporarily "unidentified" who require medical benefits will not be large.

In view of the situation at hand, I would appreciate your assistance in encouraging physicians and hospitals to exercise patience and understanding during the next several months when their services are requested by dependents of these extendees.

I must emphasize, however, that no claims may be processed for payment unless the dependent has provided a valid DD Form 1173 or a statement of eligibility as required by our contract and as outlined in ODMC Letter No. 1-60.

This information is being furnished to all contractors and to the editors of leading medical and hospital journals. We would appreciate it if you could publish a copy of this letter, or an extract of the information in the next copy of your Medical Society journal or any other news media which is circulated to your membership.

Sincerely,
W. D. Graham
Brigadier General, MC, USA
Executive Director

From AMA: Doctor Diplomats

Five physicians from Tulsa, Oklahoma, members of the First Presbyterian Church of Tulsa, are giving up their practices for six-week periods to serve voluntarily at the Miraj Medical Center in Miraj, India.

Dr. C. S. Lewis, one of these five Tulsa physicians, recently reported to the A.M.A. on the progress of the project labeled "Doctors in Asia"

The first of the group of volunteer physicians flew to Miraj in mid-August. He will return at the end of September and the next doctor will make the trip. In all, the five physicians will donate a total of thirty weeks to the program. The project is endorsed by the Tulsa County Medical Society. Funds for medical equipment, transportation and other expenses were raised through church and public contributions.

Other groups of American physicians are also becoming interesting in the possibility of initiating a similar venture in their own communities. For example, several doctors met wth Doctor Lewis during his A.M.A. visit to discuss the feasibility of adopting an overseas program which would provide medical care to another area of the world equally in need of such assistance.

Still another example of American physicians demonstrating their interest and willingness to serve in foreign mission fields on a temporary basis is shown by the large number of doctors who have written to the A.M.A. Department of International Health in the last few months to inquire about such service. This new Department administers a program approved last June by the A.M.A. House of Delegates whereby members of the A.M.A. may volunteer for service in the foreign mission fields on a temporary basis when emergencies arise. Cooperating with A.M.A. in this program are missionary agencies representing every denomination sponsoring American medical missionaries.

Physicians interested in volunteering for such service are asked to write directly to the A.M.A. Department of International Health, 535 N. Dearborn Street, Chicago 10, Illinois.

1961 MEETINGS

Nov. 6-7-8 – New England Postgraduate Assembly, Statler Hilton, Boston.

Nov. 27-30 – Clinical Meeting, American Medical Association, Denver.

Dec. 1 – New England Health Education Association—Fall meeting at 1200 Beacon St., Motel, Brookline, Mass.

Dec. 7—Semi-Annual Meeting, Connecticut State Medical Society House of Delegates. Stratfield Hotel, Bridgeport, 2:00 P.M.

1962 MEETINGS

May 3-4 – New England Health Education Association—Spring meeting—Andover Inn, Andover, Mass.

May 18-19 – Connecticut Society American Board Obstetricians and Gynecologists Travel Club meeting in Montreal.

June 25-29—Annual Meeting, AMA Medical Association, Chicago.

Nov. 26-29—Clinical Meeting, AMA, Los Angeles.

PLACEMENT WANTED

The Society's Placement Service is in receipt of the following: Internist completing three year residency including one year fellowship Cardiology, seeks association with internist group or other position.

ANY MEMBER OF THE SOCIETY KNOWING OF AN OPPORTUNITY FOR PLACEMENT OF THE ABOVE PHYSICIAN IS ASKED TO COMMUNICATE WITH THE GENERAL MANAGER'S OFFICE, 160 ST. RONAN ST., NEW HAVEN.

Seat Belts—Not Why, But Why Not?

In a timely move the Connecticut General Assembly of 1961 made it necessary after January 1, 1962 for all new passenger cars that are sold or registered in the state to be equipped with suitable anchorage units for attaching at least two sets of seat safety belts in the front seat.

Since 1956 cars driven by the state police have been equipped with seat belts, and have served well under difficult driving conditions. Now Connecticut is moving toward permitting all motorists to benefit from this known life-guarding use of seat belts.

This new regulation, to a degree, allows car owners to avail themselves of the life-saving measure easily and at less cost than previously.

Seat belts have been thoroughly tested, have already saved thousands of lives and reduced countless injuries. Belt users have 80 per cent less chance of injury than non-users who are thrown from the car in wrecks and 60 per cent less chance of injury than non-users not ejected from the car, as was proved in the Cornell University Automotive Crash Injury Research Project.

The Connecticut Safety Commission joined with the State Police and the Motor Vehicle Department in encouraging the mass use of safety belts in the state for both short and long-distance driving. Connecticut support for the idea followed endorsement by the National Safety Council, the American Medical Association, the U. S. Public Health Service and scores of police departments and owners of fleet cars across the nation. A conservative estimate of the importance of seat belts is that they reduce by 25 per cent fatalities among automobile occupants.

Without seat belts, in the event of a sudden stop or smash-up, the occupants of a car continue moving forward—into or through the windshield, into each other, or against the steering wheel post. Seat belts hold the hips down, keeping the body from flyng through the air.

Seat belts give the following assists to victims of a crash:

1) Prevents ejection—the Cornell University Crash Research shows five times the risk of death for those thrown out of the car.

2) Lessens bodily injury inside the car compared to the injury of non-users.

3) Spreads impact force over a large area of the body.

4) Gives the rider more time in which to come to an all-too-sudden halt.

5) Absorbs part of the force with its resilient, non-cutting surface.

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LEGISLATIVE CONCERN OVER DISCIPLINE

Medical discipline is much in the news nowadays, and these remarks of Governor Hollings on the subject are truly thought-provoking. This critical evaluation by a layman of a function so vitally important to all physicians is well worth reading and thinking about.

HONORABLE ERNEST F. HOLLINGS
Governor, State of South Carolina

I LIKE the title, "Legislative Concern Over Discipline." It makes for a brief and direct talk—because currently there is no legislative concern. And quite frankly, it is going to be up to you, as Dr. Jervey has so pointedly said, to see that there is no legislative concern in the future.

The items which Dr. Jervey has placed in such excellent perspective are important. From my own experience as an elective official, let me emphasize that his prescription is one that should be filled and administered as quickly as possible.

As you know, I am not a doctor, but I assure you that I am quite capable of appreciating the problems that would descend on the medical profession should it ever become a matter of legislative concern. I have personally witnessed the experiences of other professions when these professions have let themselves become a matter of legislative concern.

From the public point of view, doctors have kept their house in order. You have a high code of ethics, and loyal adherence. For this, you are to be congratulated. Were it otherwise, the public would be alarmed. Legislative halls would be ringing with cries for regulation. And in the chaos of speedy and perhaps intemperate legislation, an amputation may result where only iodine was necessary.

While the lay and legal minds of the legislative groups can and must determine what constitutes crime and the punishment thereof, deliver us forever from bodies politic, legislating ethics, morals and proprieties. We in the legal profession have had problems in the past similar to those of the medical profession described by Dr. Jervey. There was a time when the lawyer who lost his case was required to serve the same sentence that his client received.

But today we all must agree that no legislature should characterize as criminal the lawyer's judgment, the architect's taste. the teacher's thought, the minister's sermon, or the doctor's cure.

Let's first realize, then, and appreciate that the picture is not so dark, the problem not so serious as to cause the public concern. However, I must agree with you present that professionally there is cause for concern. As long as you are a doctor who is worth his salt—and mine is—as long as you are a profession determined to maintain a high standard—and I am sure you are—then the few recalcitrants that undermine your good name should lose their designation of "doctor." And there is no time like the present. As you know, it is easier and safer to treat a cut before it becomes infected.

In proceeding, I should make positively clear that my appearance is in no way critical or apprehensive of your fine profession. I am first to admit that you doctors are far more forthright about a code of ethics than sometimes we lawyers are. On occasions we have become immediately offended rather than wanting to recognize a problem. Six years ago a legislator in South Carolina introduced a bill to control ambulance chasing. The lawyers of his and other communities immediately jumped down his throat proclaiming their profession had been unwarrantedly attacked. The lawyer members of the legislature stated that while this may be a problem in the home county of the legislator involved, there was no problem in the rest of the state. After many bouquets and testimonials to the legal profession, the proposed legislation was laid to rest and the proponent nearly was.

As a former legislator and as one who is currently vitally concerned with legislation, I say to you quite candidly that legislators are ill equipped by either aptitude or attitude to handle a medical discipline problem. There is fortunately a general unwillingness and even an antipathy on the part of a legislature to invade the province of disciplining the conduct of members of any profession.

There are, of course, not many doctors in the legislative halls or congressional chambers in the United States. This is with good reason. A doctor's life does not readily lend itself to interweaving with a political career.

But habitually and regularly, from within and without, legislative halls are beseiged with the needs and problems of the farmers, the businessmen, the lawyers and other groups. The problems of these groups are constant problems of the legislature. There is general understanding because our legislatures are made up of farmers, businessmen, lawyers and other groups. But not doctors.

Perhaps this is why in the United States we spend more for hoof and mouth disease than for basic research in mental health.

In addition to the negative aptitude factor, there is a positive deterrent in attitude. A legislature only focuses and mirrors public opinion.

Progress and developments in your profession have been so rapid that the profession itself has had a hard enough time keeping up. In fact, the progress in some measure has brought about the wrong attitude in the public mind, and the public mind is certainly reflected in legislative halls. While a desire for service and comfort and convenience has eliminated the necessity of the housewife chasing around to the meat market for meat, the fruit stand for fruit, the bakery for bread, and the corner grocery for canned stuffs—and she now can go to the super market for all her needs—this is not true when it comes to medical attention for the family. It's to the orthopedist for the broken arm, to the obstetrician for the baby, to the ear, nose and throat specialist for the sore throat, to the dermatologist for the skin infection that Mrs. America and her family must travel. The one-stop service of the family doctor exists no more.

This has resulted in better treatment, better health. But most assuredly it's not the most convenient. The American public is frustrated by Specialization. Another public irritant is the high cost of medicine. Without discussing the reasons why, the fact is that it is expensive to be ill. Part of that expense is even now subject to congressional inquiry. The advertisements of drug concerns don't help. Every morning on one national TV show a drug house confirms America's suspicion by telling the public they are being cheated by the high costs of vitamins. The majority of our sick are in the old age bracket—the very group that cannot afford medical care. Savings made over the years are wiped out with one hospital stay, and these folks are the most vociferous in their criticism of the medical profession. These things infiltrate the legislative mind. Moreover, there are day to day experiences with your profession that shape the legislative attitude. Equipped or not, informed or not, the legislator must provide for health programs. A substantial number of the members of your own General Assembly make some five to seven thousand dollars a year. After much debate they wearily appropriate eighteen thousand dollars a year for a psychiatrist at the State Hospital. Then they are unable to fill the position. We in South Carolina have six such vacancies now. You ought to see the expression on these representatives' faces. You ought to see theirs and the expression of others when it comes to medical college appropriations. To add thirty more to the freshman class at the State Medical College, many of the legislators think all you have to do is get another room and a teacher. They have no idea of the laboratory space and high cost involved for the instruction of medical students. All they knew is a small community is that Sam Jones is honest, clean, considered a smart boy, and they have nearly as difficult time getting Sam into medical school as the United States had getting Ham into space. They read that in 1909 we had one doctor for every 568 persons. Now we have only one for every 709. To many this suggests that the medical profession is restricting its own growth to enhance its own position. A good illustration of this attitude was manifested in the tremendous struggle we had in my home state to outlaw the practice of naturopathy. We practically had to turn a grudging legislature upside down to do it.

Some of you may think I am painting as dark a picture with the legislature as Dr. Jervey has done with the need for legislation. I'm confident Dr. Jervey will agree with me that in South Carolina we have an excellent legislature. One sympathetic to medical problems. Only recently has this body received national recognition for their work in mental health. But our legislature would be appalled at the thought of having to determine technical aspects of medical discipline. Remember, you are asking to be legislated crimes against the profession and not crimes against the state. Sometimes, as in the case of abortion, they are crimes of both. To control legal discipline, even we lawyers who make up the majority in most legislatures wouldn't attempt that. Five years ago the legal profession in South Carolina determined that the discipline of lawyers could no longer be left to grievance committees. We had to be more forceful. Using the rule making authority given by the legislature, the Supreme Court of South Carolina adopted the Canons of Professional Ethics adopted by the American Bar Association. Next, the court adopted appropriate rules for the enforcement of these canons. The canons there-by took on the force and effect of law. Some of the titles of the canons are as follows:

1) The duty of the lawyer to the court.
2) The selection of judges.
3) Attempts to exert personal influence on the court.
4) Professional colleagues and conflicts of opinion.
5) Fixing the amount of fee.
6) Advising upon the merits of a client's cause.

Can you imagine a legislative body attempting to enact these? If these canons had been proposed in the legislature, we would still have been debating them. These are matters which simply cannot be legislated. The medical profession must realize that this is a professional problem and not a legislative one. The determination must be by doctors and not politicians.

One cardinal principle to be remembered by this group is that no attempt at legislative regulation should ever be made unless the overwhelming majority of the profession recognizes the need for the legislation. The profession must agree in overwhelming majority to the regulation. If there is a substantial minority, if you are not organized, if you have not sought out leaders in the General Assembly, explaining your problems so that they understand and appreciate your goals, the mere introduction of a bill to secure medical discipline will never succeed. Its introduction, unprepared, will hurt the medical profession. To put it differently and paraphrase our President, ask not what the legislature can do for you, but what you can do for the legislature. For it is up to you to prepare, propose, and persuade. Otherwise don't start the operation.

One caveat—if it were possible for words to take on color, let me say these in flaming red: Do not submit general legislation that damage suit attorneys can turn into malpractice statutes. These malpractice cases are the present day virus of your profession. The best antibiotic I know would be the self-discipline Dr. Jervey suggests. The public will not be as quick to render an unfair or unjust verdict against a profession that disciplines itself.

Your problem is solved by the rule making power. First you must secure from the legislature authorization for your Medical Board to promulgate and adopt rules and regulations governing the discipline of the medical profession. With this authority, your Medical Board can then adopt the Canons of Professional Ethics of the American Medical Association. Finally, the Board can put into effect the necessary rules for the enforcement of these canons.

You gentlemen should and must be commended for the great role you play in making life more pleasant. We laymen hold doctors in high regard—sometimes even in awe. If you will permit me, I'd like to pay my respects to all of you by paying public respect to my own physician—your President. He keeps me fit and in good spirits—both by his actual treatment, and by the knowledge that he is capable and available. Even more, I admire him for he is as dedicated to his profession as he is to his patients. There are hundreds who feel the same way about him—and about each of you.

Reprinted from Federation Bulletin, *Albany, New York, with permission of the author.*

There be four things which are little upon the earth, but they are exceeding wise:

The ants are a people not strong, yet they prepare their meat in the summer;
The conies are but a feeble folk, yet make they their houses in the rocks;
The locusts have no king, yet go they forth all of them by bands;
The spider taketh hold with her hands, and is in kings' palaces.

Proverbs 30: 24-28

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Special Article

The Connecticut Physician And Youth Fitness

Allan J. Ryan, m.d.,
Meriden

The current interest in the physical fitness of America's young people arose principally from three concerns. First, there was the highly publicized and widely misinterpreted report from the Selective Service system which purported to show that about fifty per cent of those examined in the draft had to be rejected for physical reasons. Second, was the Kraus report,[1] which compared performances in four simple exercise tests between European and American school children, much to the disadvantage of the latter. Third, was the somewhat justified anxiety that the Russians were ahead of the United States in physical fitness as well as in certain scientific developments at a time when the future still might hold in store an armed conflict between the two nations.

President Eisenhower called a meeting of a group of outstanding persons in sports and in physical education at the White House early in 1955. As the result of their advice, he scheduled a nationwide conference on the fitness of American youth for September of the same year. This conference was postponed by his illness of that summer, but was eventually held at the U.S. Naval Academy in June, 1956. Out of this conference came the appointment of the President's Council on Youth Fitness and the Citizen's Advisory Committee to this Council. The Council is a Cabinet-level organization consisting of the Secretary of the Interior (who is Chairman), the Secretary of Defense, the Secretary of Agriculture, the Secretary of Health, Education and Welfare, the Secretary of Commerce, and the administrator of the Housing and Home Finance Administration. The Citizen's Advisory Committee has 129 members, including seven physicians. Its Chairman is Homer C. Wadsworth, executive director of the Kansas City Association of Trusts and Foundations. Shane McCarthy is the executive director of the President's Council, has a small staff in Washington, D.C., and travels extensively in an effort to stimulate interest in fitness in the hinterland.

Four more nationwide conferences have been held on this subject, at the U.S. Military Academy in 1957, at Fort Ritchie, Maryland in 1958, at the U.S. Air Force Academy in 1959, and at Chicago in 1960. National Youth Fitness Week has been proclaimed each year to focus attention on the subject. Many governors, including Connecticut's, have appointed their own committees to investigate local problems and stimulate community action. Promotional materials have been prepared and distributed. A report of the Citizen's Advisory Committee entitled, "The Fitness of American Youth" has been published.

The Author. *Attending Surgeon, The Meriden Hospital, Meriden, Member, Governor Dempsey's Committee on Youth Fitness.*

The American Medical Association entered officially into these activities with the following resolution, which was passed by the House of Delegates in June, 1959:

"Whereas, The American Medical Association has had a long-standing interest in the fitness of youth, and through its Department of Health Education and other departments and divisions, and its Joint Committee with the National Education Association and many other cooperative relationships, has devoted considerable energy and effort to the improvement of youth fitness through a broad program of health education designed to emphasize intellectual, emotional, social, and moral and spiritual as well as physical components of fitness; and

Whereas, The President of the United States has activated a Council on Youth Fitness among his Cabinet Members and has appointed a Citizens Advisory Committee on the Fitness of American Youth, composed of representative American leaders including several physicians, which are developing plans, suggesting projects, and recommending practices that are generally in keeping with the broad point of view on youth fitness held by the medical profession; and

Whereas, The views of the President's Council and the President's Citizens Advisory Committee on the Fitness of American Youth have been expressed as: to encourage the expansion of health education, to increase the status of physical education, to encourage continuing health supervision, including periodic medical examinations and follow-up; and

WHEREAS, The Council and the Advisory Committee, in their deliberations, have emphasized the importance of developing youth fitness programs through existing agencies and organizations to prevent unnecessary duplication of services and facilities and cumbersome bureaucratic structures; therefore be it

RESOLVED, That the American Medical Association, through its House of Delegates, go on record as approving in principle the aims and objectives of the President's Council and the President's Citizens Advisory Committee on the Fitness of American Youth and as urging its member physicians to cooperate in the promotion of properly developed and soundly conceived plans and programs for youth fitness; and be it further

RESOLVED, That the constituent state associations and their member local medical societies be requested, through their designated representatives, to work cooperatively with reputable professional and other ethical groups interested in the improvement of youth fitness; and be it further

RESOLVED, That copies of this resolution be transmitted to the President of the United States, to the members of the President's Council on Youth Fitness, and to the members of the President's Citizens Advisory Committee on the Fitness of American Youth."

They followed this up with a resolution passed by the House of Delegates in June, 1960:

"WHEREAS, The medical profession has helped to pioneer physical education in our schools and colleges and thereafter has encouraged and supported sound programs in this field; and

WHEREAS, There is increasing evidence that proper exercise is a significant factor in the maintenance of health and the prevention of degenerative disease; and

WHEREAS, Advancing automation has reduced the amount of physical activity in daily living, although the need for exercise to foster proper development of our young people remains constant; and

WHEREAS, There is a growing need for the development of physical skills that can be applied throughout life in the constructive and wholesome use of leisure time; and

WHEREAS, In an age of mounting tensions, enjoyable physical activity can be helpful in the relief of stress and strain, and consequently in preserving mental health; therefore be it

RESOLVED, That the American Medical Association through its various divisions and departments and its constituent and component medical societies do everything feasible to encourage effective instruction in physical education for all students in our schools and colleges."

So far, the organization showing the greatest interest in taking constructive action has been the American Association for Health, Physical Education and Recreation (AAHPER), which has, among other things, developed a national fitness testing program for school children aged 10 to 17, and proceeded to apply it to a scientifically selected cross-section of our school population. The test battery includes pull-ups, sit-ups, shuttle run, standing broad jump, 50-yard dash, a soft-ball throw for distance, and a 600-yard run-or-walk. A questionnaire directed to the 150 schools in 28 states where the children were tested revealed that only 75 per cent of the schools had any kind of physical education requirement (and many were minimal), only 75 per cent of these had a special teacher for physical education classes, one-third of the schools did not require sneakers or gym clothes for physical education, and only 40 per cent gave physical examinations to every child in school.

The Physical Fitness Committee of the Connecticut AAHPER carried out a status survey in 1957-58 which led to the Governor's Conference on Fitness, and the subsequent appointment of the Governor's Committee under the chairmanship of Alice Donnelly, Ph.D. of Danbury. In 1959-60, a questionnaire was circulated to the superintendents of schools of 169 towns in the state to determine whether the previous survey had had any effect on physical education programs in the public schools. The six recommendations of the fitness Committee, made following analysis of the state status survey, were used as the basis for the questionnaire. Forty per cent of the towns returned the questionnaire completed, with the results shown in Table I.

The sixty-nine towns that answered the questionnaire represent a cross-section of Connecticut from north to south and east to west. They include all sizes, from Hartford down to one of the smallest towns with a school. Fifty-nine towns expressed the feeling that in-service training would help to improve their programs, fifty-five thought that their program of remedial exercise might be improved, forty-two thought the same about their body-building program, and forty, the same about their testing program. Only twenty thought that their

TABLE I

RECOMMENDATIONS MADE AS RESULT OF THE STUDY 1957-1958	RECOMMENDATIONS MET		PROGRESS ON RECOMMENDATIONS	
	YES	NO	YES	NO
1. Physical Education programs should include more vigorous work for all pupils who take part in regular activities.	54	15	41	28
2. Emphasis should be placed on the development of upper arm and shoulder girdle strength, as well as strength in all other parts of the body.	45	24	42	27
3. The organization of physical education program should include planning for special or remedial work where necessary.	21	48	18	51
4. Parents should be kept better informed of the progress of their children in physical achievement, and urged to encourage improvement.	25	44	22	47
5. Equipment essential for all-round development should be provided in all schools.	38	31	38	31
6. Objective tests should be included as an integral part of a twelve year sequential program to assist in identifying the fitness and performance levels of individual children.	30	39	30	39

recreational activity and seventeen that their teaching of sports skills might be improved.

Of what interest and importance is all this to the average Connecticut physician in his office? President Eisenhower, in his message to the initial conference at Annapolis, said, "Our young people must be physically as well as mentally and spiritually prepared for American citizenship." To this we can add that they must achieve better physical fitness even to survive as long or longer than their parents. A high level of motor capacity is an essential to the maintenance of physiologic youthfulness, adequate reserves of energy, physical endurance, and even to good cardiac and pulmonary function. The contributions of physical activity to physical health are too many to be enumerated here, but have been recently summarized.[2]

What can physicians as a group and as individuals do about this? They can help to initiate and participate in community projects on Youth Fitness such as are outlined in the pamphlet of the same title published by the President's Council.[3] Where they are connected with school health programs, they can help to stimulate improvement in the teaching of and facilities for physical education. Each physician in his office can emphasize to his young patients and their parents the importance of regular and continuing physical exercise through home calisthenics, walking and bicycling outdoors, as well as through various sports activities.

Furthermore, physicians can set a personal example by adopting a personal program of physical fitness. A recent study discovered that a group of physicians rated lower in physical performance than a sample of their own patients who were convalescing from such serious chronic diseases as tuberculosis. The physician who is obviously overweight, cannot run across a street without puffing hard, and boasts that he never has time for exercise, is a poor advertisement for the value of physical fitness. As has been demonstrated in the case of smoking, the young people follow our lead. If we choose to accept a more sedentary way of life, then they will be sure to do the same.

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Since this article was written, President Kennedy has reorganized the President's Council on Youth Fitness under the chairmanship of the Secretary of Health, Education and Welfare. Bud Wilkinson, football coach at the University of Oklahoma has been appointed the president's special consultant on youth fitness and has gradually built up a staff. A booklet entitled "Youth Physical Fitness — Suggested Elements of a School-Centered Program" has been published to make widely available specific guidance in graded physical education activities for children in grade school and high school.

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Clinical Medicine

Endocrine Pharmacology

Louis H. Nahum, M.D.,
New Haven

The Author. *Lecturer in Physiology, Yale University School of Medicine, New Haven. Consultant in Medicine, Hospital of St. Raphael, New Haven; Consultant in Medicine, Grace-New Haven Community Hospital, New Haven; Consultant in Medicine, Griffin Hospital, Derby; Consultant in Medicine, Middlesex Hospital, Middletown; Cardiologist at Milford Hospital, Milford.*

The search for drugs to treat the ills of mankind is going on at an accelerated pace. It has now entered a highly sophisticated phase in which besides drugs used in the treatment of infectious diseases, it is customary to prescribe drugs to modify the function or disfunction of the nervous, cardiovascular respiratory, gastro-intestinal or renal systems. Antithyroid drugs have been in existence for some time but chemical agents foreign to the human body had until recently virtually no established uses in the manifold activities or diseases of the endocrine glands. To be sure hormones in their natural or chemically modified state to treat disease is a common practice but a knowledge of non-hormonal compounds which can alter the secretion or action of hormones is only just beginning to be sought for and developed. Already there is a large and growing number of drugs which can block particular functions of the autonomic nervous system. Similar possibilities exist regarding the secretions of endocrine glands themselves.

Gaunt et al[1] have pointed out that in the last few decades endocrine pharmacology has evolved along three phases each of which continues to be productive.

(a) The identification, isolation and synthesis of hormones and their therapeutic use in deficiency syndromes. Its prosecution has resulted in substitution therapies for diabetes mellitus, Addison's disease, myxedema, the menopausal syndrome and many other disorders.

(b) Chemical modification of hormones to potentiate or prolong their activity. The purpose of this approach was to alter rate of absorption from an injection site or delay its metabolic degradation or both. As a result, frequency of administration has been greatly reduced. Long acting insulins, esters, instead of free alcohols of the steroid hormones, are such examples. Slight chemical modifications now are devised to inhibit destruction of a hormone in the gastro-intestinal tract so that its administration is feasible and economical as for example oral use of methyl testosterone, and ethinyl estradiol instead of estradiol. Even substitutes have been produced whose structure differ greatly from the natural estrogens like stilbestrol, but produce effects identical with the natural estrogen. In all these pharmacologic manipulations there was no intent to alter the biological activity of the hormone, but only to extend, enhance or conserve it.

(3) *Chemical modification of hormone* molecules to alter their natural activity. When fluorohydrocortisone was fashioned from cortisone by Fried[2] there resulted a major alteration in the pattern of its activity, and there followed a flood of work out of which emerged numerous products. It became clear that chemical alteration of the steroid hormone molecule can result in an accentuation of one biological activity and a diminution of another. It became possible to synthesize hormone-like substances with special properties to serve specific therapeutic or experimental need like the prednisolones for treating inflammatory disease and new ones are surely coming along like Enovid to control fertility in man.

There is however emerging a newer and less well developed approach to the study of endocrinology, the use of drugs to control endocrine functions.[1] This is a field in which profitable exploitation will certainly be forthcoming. There are many ways in which a drug might modify endocrine function, but since hormones are already available that can be employed to increase function, from the practical standpoint it would be particularly useful to have glandular inhibitors. Some drugs are already known that do this but it is likely their use will increase and more perfect modifications may be expected in the future.

There are a variety of drugs which inhibit secretion of anterior pituitary hormones and therefore affect the target glands upon which the hormones act. Thus reserpine can affect anterior pituitary function in such a way as to inhibit estrous, menstruation and even fertility. Interestingly enough, the lactogenic hormone is uneffected. Chlorpromazine appears to have a similar action. Why then with such actions of reserpine and chlorpromazine have not the millions of people treated with these drugs, shown such effects. Perhaps the activity is subtle and subclinical in the dosages employed, but could become clearly manifest with larger doses. However it is clear that these drugs will not become effective therapeutic agents for regulation of the reproductive function in man, but it is certain from these results that pharmacologic regulation is possible and may be expected.

Drugs affecting the adrenal cortex are coming more and more to the front. ACTH inhibitors, direct inhibitors of the adrenal cortex like the amphenones and inhibitors of aldosterone action in the kidney (aldactone) are now under extensive study. In addition adrenal cortical suppressant activity have been described for streptomycin, heparin and a number of other agents.[1]

One of the main features of physiological regulation of the thyroid is inhibition of thyrotrophin by thyroid hormones. This principle has been extensively employed in goiter to reduce excess thyrotrophin stimulation of the thyroid gland by administering thyroid hormone. Direct thyroid inhibition can be accomplished in various ways. One is the use of iodine itself which although a constituent of the thyroid secretion and therefore in its synthesis, can under certain conditions act as a thyroid inhibitor. Thiocyanate interferes with the mechanism by which the thyroid collects and retains large quantities of iodine from the blood stream. In addition some sulfonamides and thioamides related to thiourea, block thyriod hormone production probably by blocking the iodination of tyrosine which is the first stage in the manufacture of thyroxin. The most useful therapeutic agents for controlling hyperthyroidism the thiourecil compounds have evolved from such researches. There are a variety of other compounds that have some sort of thyroid inhibiting influence but none has developed to practical applications.

There are two known hormones of the mammalian posterior pituitary, arginine or lysine-vasopressin and oxytocin which are probably synthesized in the hypothalamus, traverse neurones to the discharge point from the posterior pituitary lobe. The main function of vasopressin is to increase the permeability of nephron walls to water. In this way water reabsorption is facilitated and excretion inhibited. It is of great interest that vasopressin is needed for diuresis caused by the thiazide drugs and in the absence of vasopressin, thiazide diuretic action is reversed.[3] What this means is still unknown. But of great interest is that ethyl alcohol acts to inhibit the release of vasopressin. Nevertheless, as is well known, it is seldom a cure for edema although it acts somewhat like a diuretic.

Several types of compounds are known to have insulin like action and in recent years the sulfhonureas and biguanides have found successful use in substituting for the secretion of the isles of Langerhans. The principle compounds involved have been tolbutamide, carbutamide and chlorproamide, drugs whose activities differ only in details. These drugs together with the thiazides which have found such extensive use as diuretics and antihypertensive agents were unexpected dividends from the discovery of the antibacterial action of sulphonamide drugs and their introduction into clinical medicine. As has oftentimes been the case in the history of science spectacular advances take place in an entirely different field of medicine, than the one in which the original contribution was made.

Pancreatic hyperfunction is much rarer than hypofunction and for this reason there has been less incentive to find insulin inhibitors than insulin stimulants or substitutes. Nevertheless such drugs do have important if only limited roles and when alloxan was discovered, it satisfied an important need to experimenters, if not to medical men who sought a medical treatment for pancreatic tumors. The experimentalists have available in alloxan a drug which can produce experimental diabetes at will, so that instead of surgical pancreatectomy, it is possible to achieve selective destruction of the beta cells leaving the non-functional part of the pancreas functionally intact.

It is clear enough that there are a few well-established cases in which pharmacologic regulation of endocrine secretion can be brought about in a highly effective and practical fashion by drugs. These are of a great variety, and act in many different ways. We may expect that future advances can be made in both theoretical and applied Endocrinology. Certainly a secure foundation exists for such an expectation in what we have already learned. None of the drugs which are foreign to the body are devoid of some unfavorable reactions in some patients. To avoid "Diseases of Medical Progress" we must be more and more alert to reap the benefit while avoiding the dangers inherent in the new pharmacology.

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Clinical Pathological Conference

YALE UNIVERSITY SCHOOL OF MEDICINE

Conducted by NICHOLAS A. HALASZ, M.D.

MAY 13, 1961

Case Presentation

Dr. Forker*: Mr. S. P. is an 82 year old man who was admitted to this hospital on April 26, 1961. His chief complaint was left chest pain. The patient had recently been discharged from the medical service after a ten-day hospitalization for coronary insufficiency. At that time he was noted to have left lower lobe atelectasis and laminograms showed narrowing of the left lower lobe bronchus. The patient's past history was significant in that he had five attacks of pneumonitis over the course of the last year, all in the left lower lobe. These all responded initially to antibiotics, but some weeks after discontinuing the drugs the pneumonitis promptly recurred. Two years prior to admission the patient had a myocardial infarction. The chest pain for which he was hospitalized in March was presumed to be due to the atelectasis and not to coronary disease.

Physical examination on admission revealed a well preserved man whose only significant finding was a diminution of breath sounds and the presence of rales at the left base posteriorly. Laboratory studies were within normal limits. Multiple sputum cytologies showed no tumor cells. Pulmonary function studies were compatible with senile emphysema. Maximum breathing capacity was 72L/min., vital capacity 2,800 cc, timed vital capacity 76 per cent at one second. Bronchoscopy showed moderate narrowing and inflammation of the left lower lobe bronchus with much purulent exudate in it. Biopsies taken from this bronchial wall showed only chronic inflammation. Bronchography revealed a marked collapse of the lower lobe with bronchiectasis. The lingula and other parts of the upper lobe bronchial tree were normal.

On May 9, 1961 left lower lobectomy was performed under general endotracheal anesthesia. The lobe was markedly collapsed, scarred and the space created by its shrinkage well occupied by the enlarged upper lobe. The postoperative course was uneventful. The patient's temperature remained under 100 and he was ambulatory most of the time. He was discharged on the tenth postoperative day in good condition with a well healed thoracic wound.

Discussion

Dr. Halasz†: The decision to resect a chronically diseased lobe in an 82 year old man such as our patient today is not to be made easily. However, the apparent physiologic age of this patient was considerably less than the number of years he has lived. Having led an active life until the beginning of his pulmonary symptoms he wished intensely to resume this. The patient, his family, and his family physician all felt that they were willing to accept the additional risk that thoracotomy and pulmonary resection meant for him, rather than to continue with inevitable recurrent infection and progressive disease in the lower lobe. This is why surgery was offered to him and ultimately performed.

It is presumptuous for me to talk about the pathogenesis of bronchiectasis to those of you who have heard Dr. Liebow discuss it. In brief recapitulation, bronchiectasis occurs as a result of the involvement of both tracheobronchial tree and the pulmonary parenchyma. Disease of the bronchi produces weakening and loss of elastic support within these structures, whereas pulmonary parenchymal involvement leads to collapse, scarring, and resultant traction. The traction exerted upon the weakened bronchial tubes causes dilatation. Dilatation, loss of contractility and the destruction of the ciliated epithelium results in stasis of secretions within the involved bronchi. This in turn leads to further infection whereby more parenchymal and bronchial involvement is produced.

The etiology of bronchiectasis can hardly be considered as specific. Any necrotizing pneumonias which organize may result in bronchiectasis. Well over half occur after the common, garden-variety of bacterial broncho-pneumonia and this presumably was the causative agent in our patient today.

The above pathogenesis explains the predominance of bronchiectasis in the lower lobes. Accompanying involvement in the middle lobe on the right side (40%) and the lingula on the left side (75%) is frequent. Some 30% of patients show some degree of bilateral involvement usually in the lower lobes. In unilateral disease, the left side is involved somewhat more frequently than the right. Other frequent precursors of bronchiectasis are measles and pertussis.

In addition to the above causes, some specific exciting etiologies have to be considered. Fig. I.

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* Intern in Surgery, Grace-New Haven Community Hospital.

† Resident in Surgery, Grace-New Haven Community Hospital.

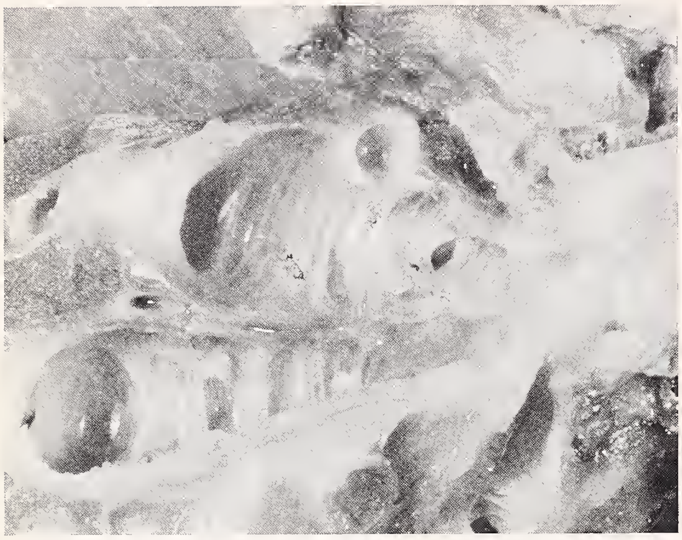

Figure I

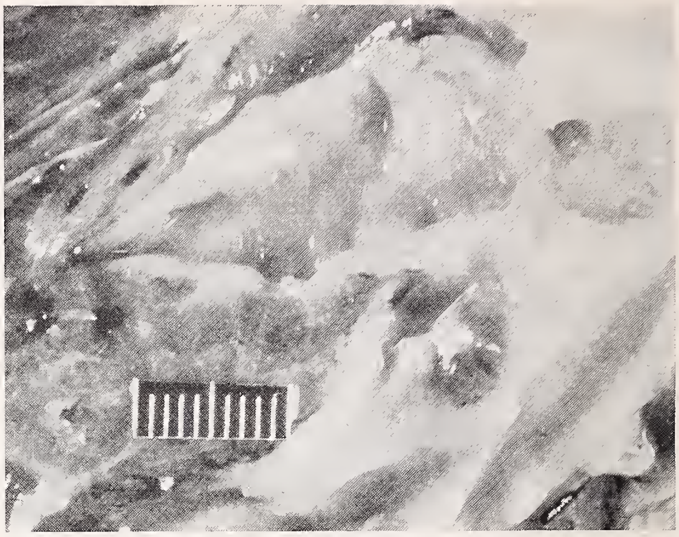

Figure III

This five year old child whose upper lobe is shown on the slide, aspirated a timothy weed. It lay in the anterior segmental bronchus for several months, at least. The resultant saccular bronchiectasis is well demonstrated. Obstructive bronchiectasis may be the result of enlarged lymph nodes in the lobar hilum. Fig. II. This slide demonstrates bronchiectasis in the lateral segment of a woman's middle lobe. The cause is well demonstrated to be a calcific mass perforating into the bronchial lumen from an adjacent hilar lymph node. This is the so-called middle lobe syndrome. Finally, neoplasms can and do cause obstructive bronchiectasis. Fig. III. In the next slide is shown a small proximal obstructing squamous carcinoma blocking a middle lobe bronchus. The dilatation and distortion of the bronchial wall is quite evident.

Some specific infections frequently lead to bronchiectasis. Forty per cent of patients with moderately advanced or advanced tuberculosis have bronchiectasis of some degree. Certainly upper lobe bronchiectasis is almost pathognomic of antecedent tuberculosis in the absence of any proximal obstruction by tumor or foreign body. Fig. IV. The slide shows the cross-country destruction of parenchyma and the resultant diffuse saccular and cylindrical bronchiectasis in a young woman with a history of tuberculosis. Finally, certain specific diseases have to be considered, as frequently associated with bronchiectasis. Fig. V. In the next slide you see the advanced wide-spread disease present in the right lung of a child with mucoviscidosis (pancreatic fibrosis). Hypo-or agammaglobulinemia similarly will predispose to bronchiectasis because of the susceptibility to recurrent infection.

Mr. S. P., our patient today, did not demonstrate the classic picture of bronchiectasis, because of the good medical care he had been receiving. The uncontrolled, untreated bronchiectatic presents a totally different picture. The advanced case is a miserable, ailing, wasted and socially ostracized individual. His breath is foul, he produces purulent

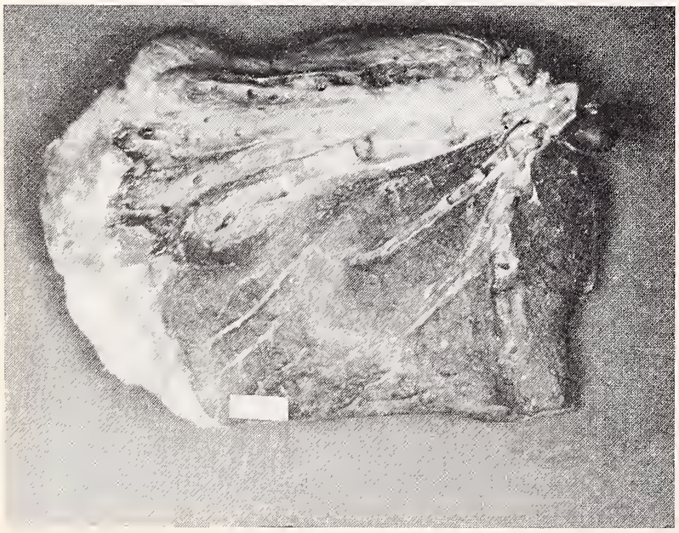

Figure II

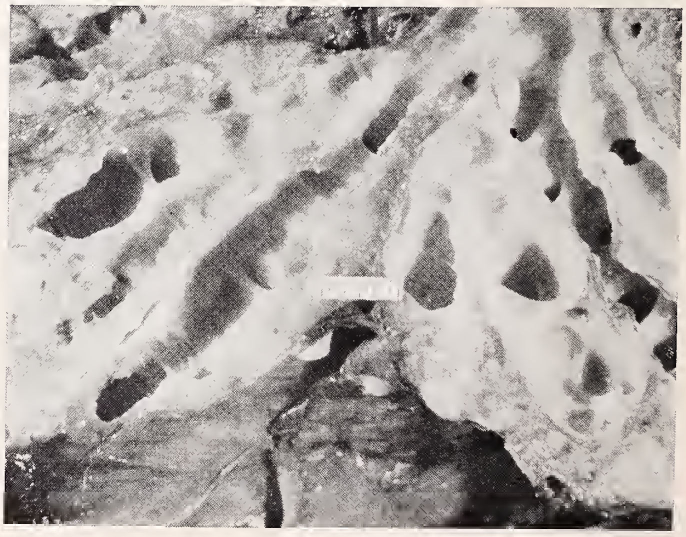

Figure IV

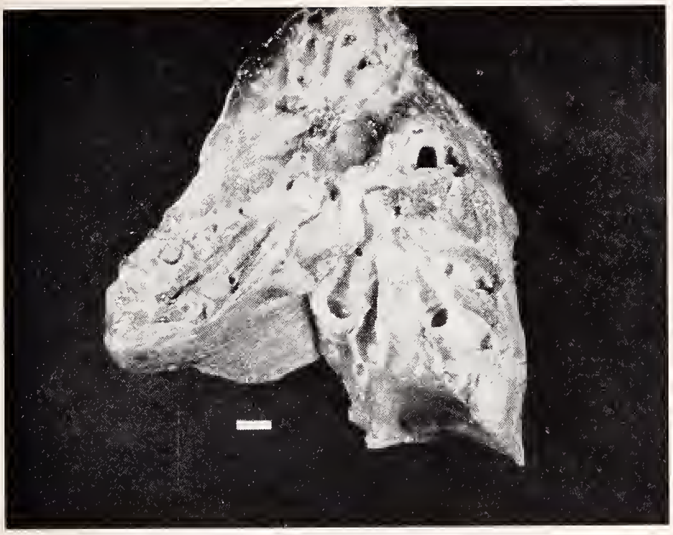

Figure V

sputum in large amounts and often vomits after coughing. Recurrent infections keep him from working or attending school steadily, chest pain and frequent fevers diminish his activity and usefulness. Sinusitis is present in some 50% of these people and about 20% will show clubbing of the fingers. The cough is accompanied by some degree of hemoptysis in 50%, severe bleeding in 10%, which is lethal in about 1%.

The history and physical examination can lead to a presumptive diagnosis of bronchiectasis. However, a definitive diagnosis is made only by bronchography. It must be recalled that for some 4 to 6 weeks after an attack of pneumonitis, the bronchial tree may show changes consistent with bronchiectasis. These, however, may be reversible and should not be construed as evidences of permanent damage. Bronchoscopy should be performed to rule out specific obstructive lesions. Similarly, a barium study of the esophagus is indicated, both to eliminate possible obstructive pathology leading to aspiration, and to rule out a fistulous communication with ectatic segments on an congenital basis. In patients with cystic changes in the medial and posterior basal segments, angiocardiography is well worthwhile. It will serve to demonstrate anomalous systemic arteries ascending through the pulmonary ligament such as are present typically with bronchopulmonary sequestration, a congenital malformation that mimics bronchiectasis sometimes.

The medical management of bronchiectasis is based on the control of infection and the relief of cough and sputum. Infectious exacerbations are treated by specific antibiotics based on the cultures of the sputum. There is today an increasing interest in the use of prophylactic antibiotics in these patients. From experience gained in the treatment of chronic bronchitics, it would appear worthwhile treating inoperable patients prophylactically to diminish the progress of the disease. The control of the sputum involves its liquefaction by humidification of inhaled air and by the use of detergents and iodides to produce a thinner mucus. Bronchodilators may be of value if there is accompanying bronchospasm. By far the most important single measure, however, is postural drainage. This is the keystone of conservative treatment. It must be done knowing both the anatomy of the tracheo-bronchial tree and the specific distribution of the patient's disease. Dangling the patient's head over the side of the bed for some ten to fifteen minutes may give nothing but a headache. The entire trunk must assume a dependent position if the basilar segments are to be drained and if lateral or medial segments are involved, the trunk is to be turned as well. Postural drainage is not continued when unproductive.

Surgical therapy must depend on several factors. The severity of symptoms, the extent of the disease and the type of the disease are the main criteria. Disease that is asymptomatic or causes but minimal symptoms does not constitute an indication for resection. Unilobar or unilateral disease certainly is treatable and curable by resection. Bilateral involvement, may likewise be amenable to surgery in stages if the upper lobes are largely normal. Control of disease on the major side by resection may cause minimal disease contralaterally to become asymptomatic. Finally, the type of disease must be evaluated. Cylindrical diffuse bronchiectasis has recently been shown to be a progressive form of the disease, progressive both in the area already involved and in the sense of extension into currently uninvolved segments and lobes. Therefore, surgery may not be as effective as in the saccular type. It is extremely important to search thoroughly for a specific etiology prior to undertaking either medical or surgical treatment. Obstructive lesions in particular must be ruled out.

We might also briefly discuss at this point the role of sinusitis in this condition. It is associated with bronchiectasis in about half of the patients with long-standing disease. Whether this be primary or secondary is unclear at present. Suffice it to say that sinusitis should be controlled by medical or surgical means, because it does contribute considerably to the discomfort of the patients and may influence the course of the disease.

As we have mentioned, many patients seen today have bilateral advanced disease with emphysema, fibrosis, and ventilatory insufficiency. Therefore, our major hope must lie in prevention, finding and treating early and vigorously all pneumonias whether they be in children, young adults, or in oldsters such as our patient today. With broad spectrum antibiotics available, this disease should be preventable in a large percentage of cases.

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CLINICAL PHOTOGRAPHS

Acne vulgaris before treatment

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Around The State

Naugatuck Valley Medical Society

The Naugatuck Valley Medical Society has begun distribution of its new Personal Health Record. This form contains space for recording all immunizations and all significant past medical history of each individual. It will be distributed through the doctors office and at the local health clinics and to the thousands of citizens who annually receive their polio immunizations at the Naugatuck Valley Medical Society polio clinics. The public relations value of this project is considered to be high.

At the September meeting a committee was formed to begin an active grass roots program for recruiting local youths to the field of medicine. It consists of Erwin Lencz Chairman, and Francis Burns, Joseph J. Pagliaro and Buel K. Grow,

The Naugatuck Valley Medical Society Speakers Bureau under the chairmanshp of Ralph Edson has begun its fall program of speaking engagements and this program has been well publicized in the local press.

The results of a social security poll of all the local physicians belonging to the Naugatuck Valley Medical Society were forwarded to the Connecticut State Medical Society for their information. The results of this poll were rather surprising and it is urged that the Connecticut State Medical Society undertake a state-wide poll of all its members.

Concerning the King-Anderson Bill, over fifty local organizations and groups have been contacted by letter informing them of the Naugatuck Valley Medical Society position on this legislation. Several groups have already offered some form of support with resultant favorable press releases.

Doctor's Office

Louis Baldi, M.D., announces the opening of an office for the practice of internal medicine at 190 Main Street, East Haven.

Rocco Cornacchia, M.D., announces the opening of an office for the practice of internal medicine and cardiology at 172 Meadow Street, Naugatuck.

Marion Cusnir, M.D., announces the removal of her office from 97 East Main Street to 110 Colony Street, Meriden.

MacEllis K. Glass, M.D., announces the opening of an office for the practice of orthopedic surgery at 2660 Main Street, Bridgeport,

Philip D. Henry, M.D., announces the removal of his office from 74 Judson Street to 299 Seymour Avenue, Derby.

Thomas E. Liptak, M.D., announces the opening of an office for the practice of internal medicine at 2660 Main Street, Bridgeport,

John A. Nagle, M.D., announces the opening of an office for the practice of internal medicine at 65 South Street, Stamford.

Morris Slater, M.D., announces his return to practice as a dermatologist with offices at 1100 Dixwell Avenue, Hamden.

Hilliard Spitz, M.D., and William J. Murray, Jr., M.D., announce their association with Gilbert M. P. Leib, M.D., in the practice of internal medicine and cardiology at 447 Montauk Avenue, New London.

Special Notices

WATERBURY HOSPITAL TO HOLD OPEN HOUSE

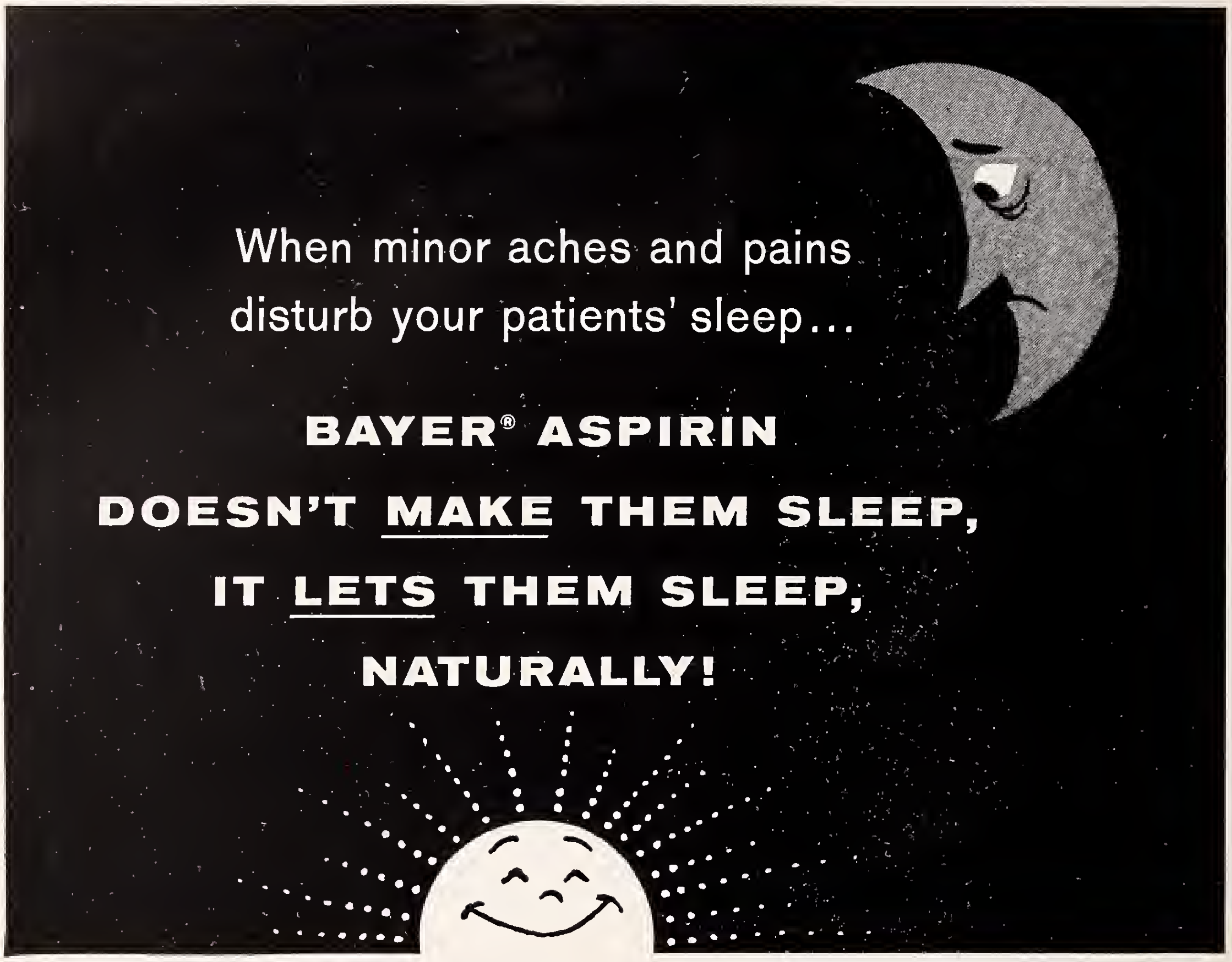
The Department of Physical Medicine and Rehabilitation of Waterbury Hospital will hold open house in its newly expanded quarters on Saturday, December 2, 1961.

To highlight the event, a two-hour "Symposium on Myopathies" will be held in the morning at 10:30. Dr. Sung J. Liao, department director, cordially invites all doctors to attend. Speakers will be:

Raymond Adams, M.D., Bullard Professor of Neuropathology, Harvard University School of Medicine, and Chief of Neurological Service, Massachusetts General Hospital, Boston, whose topic will be: "Clinical and Pathological Aspects of Myopathies"; Arthur Watkins, M.D., Assistant Professor of Medicine, Harvard University School of Medicine, and Chief of Physical Medicine, Massachusetts General Hospital, Boston, whose topic will be "Electromyography and Electrodiagnosis of Myopathies and Allied Diseases"; Thomas Hines, M.D., Associate Professor of Medicine, Yale University School of Medicine, and Chief of Physical Medicine and Rehabilitation, Gaylord Farm Sanitorium, Wallingford, Connecticut, who will discuss "Functional Braces and Adaptive Equipment for Patients with Neuromuscular Diseases"; and Dr. O. J. Bizzezero, Associate Clinical Professor of Medicine at Yale University School of Medicine, and Chairman of the Graduate Training Committee at Waterbury Hospital, will serve as moderator.

NEW YORK DIABETES ASSOCIATION

The ninth annual all-day symposium of the Clinical Society of the New York Diabetes Association, will be held on Friday, December 1, 1961. Physicians, medical students and other professional personnel are cordially invited. Advance registration is required and may be made by calling or writing the New York Diabetes Association, 104 East 40th Street, New York 16, New York, OXford 7-7760. Admission will be by ticket only.



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Book Reviews

THERAPEUTIC EXERCISE by Sidney Licht — Second Edition. Published by Elizabeth Light, 360 Fountain Street, New Haven, 15, Connecticut. Pp. 959, $16.00.

REVIEWED BY DENIS S. O'CONNOR

This third volume of Physical Medicine Library originally published in 1958 has in this short time required a second edition. This fact in itself would indicate the value of this work.

This is a large volume but it is not the work of one person but the combined effort of thirty-three authorities in physical medicine from all over the world.

One might wonder how the simple subject of therapeutic exercise could require so many pages for its' delineation and who could be interested to the extent of reading so much about such a limited subject.

The book's principal value would be for the physiatrist and the physical therapy technician whose understanding of muscle physiology is basic to the treatment of conditions involving dysfunction of the muscles.

It is basically a text book for the student of Physical Medicine but it should be in the library of the orthopaedist, the school physician, the athletic team physician, the general practitioner for reference on particular problems and for reading to increase one's fund of knowledge on a subject which has such a wide application to everyday life.

The first half of the book is devoted to muscle anatomy, physiology, dynamics, functions, techniques of examination and measurements and the broad principles of exercise. The second part is devoted to the exercises for special disease conditions such as poliomyelitis, arthritis, cerebral palsy and amputations.

The illustrations are pen and ink drawings which are particularly good in a subject of this type.

Each chapter has a wealth of references but the contents of the book itself is so exhaustive that it is likely that only the researching student will find it necessary to go outside the book itself for all the information on exercises that he is likely to need in practice.

This is a book for one's library for reference or for interesting reading and for the doctor who would like to be more specific in his prescription of the therapeutic exercise, it is invaluable.

RECENT ADVANCES IN HUMAN GENETICS. Edited by L. S. Penrose, M.D., Little Brown & Co., Boston, Mass., 1961 189 pp. $8.00.

REVIEWED BY HERBERT LUBS, JR.

This short book is another in the recent series of books which document the recent advances in human genetics. Eight different topics are discussed and perhaps five of these are of interest to the non-geneticist. The first chapter by Professor Penrose on "Mutation" is clearly written and summarizes well the different types of mutation that are felt to occur, as well as techniques for inducing mutation. The various methods of calculating mutation rates are well outlined. The chapters by D. G. Harnden, "The Chromosomes" and by O. J. Miller, "Developmental Sex Abnormalities" in combination offer an excellent review of the many recent rapid advances in these related fields. The discussions begin from the basic techniques and include all but the most recent findings. These two chapters are probably the most useful ones for the clinicians. The fourth chapter on "Genetics of Growth and Development of the Foetus", also by Professor Penrose, is somewhat disappointing simply because so little is known about this field. Most of the discussion is limited to a few examples such as birth weights, gestation time and anencephaly. The chapter by Park Gerald on "The Abnormal Haemoglobins" is also up to date, but is somewhat difficult to follow since the biochemical data relative to each hemoglobin is discussed separately from the genetic data. Little clinical data is offered, but a good frame of reference is provided.

The discussion by S. B. Holt on the "Inheritance of Dermal Ridge Patterns" is well done and excellently illustrated but still of little interest to the clinician since the genetic control of fingerprints is still poorly understood.

C. A. B. Smith also offers a lucid discussion on "Statistical Methods and Theory" in relation to genetics but this also will be of little interest to the non-geneticist.

For those who are interested in a glimpse into future developments, the chapter by J. H. Renwick on "Elucidation of Gene Order" should be particularly enjoyable. The various methods of carrying out linkage studies which range from family studies to biochemical studies on hemoglobins are discussed with unusual clarity.

In summary, the book is well carried out and generally simply written. Several chapters in particular offer excellent reviews of recent developments.

MEDICINE TODAY by Marquerite Clark, Funk and Wagnalls, 153 East 24th Street, New York, New York, May 1960, 352 pp. $4.95.

REVIEWED BY LOUIS H. NAHUM

There are fewer than 150 members of the science and medicine "working press". Considering the vast amount of material appearing daily it would seem as though there might be a serious problem in handling the great flow of modern medical and scientific copy. The way the author has handled these subjects in this book, she can take great pride in her craftsmanship, for she is not a doctor, but a science writer who has devoted at least two decades to writing about medicine in magazines, books and *Newsweek*. She has clearly mastered the language, has tried to be open-minded and wary of misleading statements, inaccurate quotations and over-enthusiastic reporting on some experimental drug or treatment which might raise false hopes and end in bitter disappointment.

The book is not written for doctors but for the vast public that is daily becoming more interested in the research laboratory, the Hospital clinic as well as the consulting room. Like all science writing, the writer cannot have a viewpoint on any subject covered but must depend on quotations from various authorities occasionally in disagreement. Nor can it emphasize the growing point at which the future is foreshadowed, for this requires the synthesis of a great mind working in the field. But it is a report on a "decade of progress."

There are fourteen chapters which deal with the most pressing problems in the diseases affecting mankind. Such as "Heart and arteries"; The riddle of cancer; mental health; psychosomatic ills; suicide; arthritis; diabetes; "The Virus"; As the child grows; Women and their ills; "Reducing Diets, no safe one is easy, no easy one safe". A chapter on how drugs are made and one on unconquered diseases like multiple sclerosis, tuberculosis, kidney disease, acne, radiation bane or blessing, ulcers, tooth decay containing a good treatment of fluoridation, allergies and rehabilitation. There is a good index containing the hundreds of authors quoted throughout the pages.

The difficulty about books of this type arises from the rapid progress which is taking place in all fields of medical science. Some of what is in it is already outdated and before long much more will be. However, the statistical part of the book will endure. The number of heart cases, the ravages of cancer, the number of suicides etc., are in themselves a compelling bit of news which should encourage the public to take a greater interest in the health of the nation and actively support the researcher which alone can lead to the solution of our health problems. We are told that the medicine of America is on the highest plane of all nations in the world, but Dr. Linus Pauling has eloquently brought out that our health when measured against our standard of living is not so great. Perhaps a greater contribution to basic research would alter this standing. But to achieve this, people must be informed in such a way as to imbibe a basic philosophy. The merit then of science writing is not only to inform the public of major medical discoveries, but to lead them to the realization that only through research can we advance the frontiers that scientists are forever probing into the mysteries of the unknown. They are the great heroes of today. If writing science for the public reveals the real heroes, and gives them economic and social support, then science writing will fully achieve its two purposes, information and inspiration. This book like all science writing is long on the former and somewhat short on the latter.

PATHOLOGIC PHYSIOLOGY MECHANISMS OF DISEASE. Edited by William A. Sodeman, M.D., Third Edition, W. B. Saunders Co., Philadelphia 1961, 1182 pp. $15.00.

REVIEWED BY LOUIS H. NAHUM

This volume as the two before it, approaches the problems of disease in the field of internal medicine from the standpoint of disturbed physiology. It analyzes symptoms and signs and the mechanism of their development. Why do symptoms appear and how? A physician who knows this will find an explanation for the many findings he elicits in his examination of a patient. He will find that today physiology is the backbone of every medical discipline, that pathology is no longer confined within anatomical barriers but has broadened considerably and developed into pathologic physiology.

The book consists of twelve parts. Pathologic physiology, Genetics and Disease, Metabolism and the Endocrine Glands, Infection and Allergy, Physical Toxic and Chemical Agents, the Circulatory System, the Respiratory System, the Digestive System. The Urinary Tract, the Blood and Spleen, the Locomotor System, the Nervous System and an extensive index.

The contributors are all leaders in their respective fields and because of rapid advances in our knowledge of pathologic physiology of disease, there have been many revisions since the last edition. However, to keep the book in size, certain other revisions have been made especially the reduction in the normal physiology but without loss of concepts to understand the abnormal.

Dr. Benjamin Gendel has improved the presentation on genetics by explaining the progress from the standpoint of recent new techniques. Dr. Thorpe Ray has completely redone the section on water and electrolyte balance. The protective mechanisms of the lungs has been completely revised by Dr. John Killough. The chapter on the pancreas has been redone. And a new approach to diseases of the nervous system has been presented by Doctors Alpers and Mancall. In spite of the large number of contributors one finds a remarkable degree of effective integration of thought and concept.

It is an important book for students, interns and practicing physicians and should be read by all who are interested in medical progress and practice.

Equal Opportunity Key To M.D. Supply

Equal financial opportunity to study medicine is the key to the future supply of physicians, Jacob P. Meerman, Ph.D., department of economics, Washington State University, Pullman, Wash., said.

The ultimate goal should be to provide the opportunity to study medicine to every individual who has the desire and the ability, he said in the current Journal of the American Medical Association.

It is well known that medical education is more expensive than an education in other natural sciences, he said. If communities subsidized medicine to the same degree as graduate training in some of the other professions and provided loans for medical students, he said, there would be a "considerable expansion in the number of medical students and study facilities."

Meerman, until recently a research associate in the A.M.A.'s department of economic research, said the "desirability of expanding the physician population is unquestioned."

However, he said any attempt to predict the precise number of physicians needed probably will "miss the mark substantially."

This is because most predictions are based on the ratio of physicians to the population, he said, and population forecasts "are subject to wide margins of error" because of unpredictable fluctuations in birth rates.

OBITUARIES

Nelson Asa Pomeroy, M.D.
1868 - 1961

Nelson A. Pomeroy, Dean of Waterbury physicians, died at the Waterbury Hospital on September 4, 1961 after a long illness.

He was born in Suffield, Connecticut on August 22, 1868, the son of George and Mary (Nelson) Pomeroy. His early education was in the public schools and Suffield Academy from which he was graduated in 1886.

He studied medicine at the College of Physicians and Surgeons of Columbia University, receiving his doctor's degree in 1896. After serving an internship of three years at Bellevue Hospital, New York, he entered private practice in Waterbury. He became one of our most skilled general surgeons.

He was an attending surgeon on the staffs of both the Waterbury Hospital and St. Mary's Hospital. He was past president of the Waterbury Medical Association and also past president of the New Haven County Medical Association. He was a Fellow of the American College of Surgeons.

Dr. Pomeroy retired from the practice of medicine in 1939 at the age of 71 years. He continued to be active, however, and he never lost interest in medicine, in medical societies and in hospitals. He was a member of the Board of Health for many years. He is survived by his widow the former Katherine Hill. His dedication to his profession, his integrity and his great interest in humanity endeared him to all whose privilege it was to know him.

J. H. Green, M.D.

Carl P. Viola, M.D.
1910 – 1961

Carl Philip Viola was born in New Haven, Connecticut on May 17, 1910, the only child of Antoinette and James Viola, an Italian emigrant watchmaker. Educated in the New Haven Public School System, he graduated from Yale in 1932 and received the degree of Doctor of Medicine from Tufts in 1936.

His internship was served at St. Mary's Hospital in Waterbury, where he met Lillian Fahy, R. N. whom he later married in 1940. In 1937 he established a general medical practice in Milford and soon his conscientious and skilled care of patients attracted a large and faithful following. Although his increasing professional and family responsibilities kept him from seeking further training in his first love, obstetrics, his skill won recognition from his colleagues and he served as chief of obstetrics at Milford Hospital. He also served as secretary of the Milford Hospital Staff and the Milford Medical Society. He was a member of the American Medical Association, New Haven County Medical Association, Connecticut State Medical Society and New Haven Medical Association.

Dr. Viola's main interests were his family and his busy practice but he also found time to play piano well, to read widely, to attend sporting events, and to listen to classical music.

He leaves his three sons and three daughters an abiding religious faith and the accolades of an honorable career as a family physician. His unassuming presence will be missed by his colleagues in Milford.

G. S. Parrella, M.D.

Samuel S. Katzman, M.D.

1895 – 1961

The sudden death of Dr. Samuel S. Katzman, "Doc" as he was affectionately known to his many friends, came as a shock to every one who knew him, although he had had previous cardiac crises during the past eleven years. He was a graduate of Jefferson Medical College and practiced in Hartford for forty years. Dr. Katzman was essentially a general practitioner, and he at one time did some special work in proctology. For several years he served as police surgeon, and for many years as examining physician for insurance companies. Dr. Katzman was very quiet and unassuming, but a very hard working physician.

Surviving are his wife, Bertha Hirshberg Katzman; two sons, Merel and Harold, and four grandchildren. One of his greatest joys was seeing his sons married and through the same medical school as he attended. Both sons served internships at the Hartford Hospital.

Dr. Katzman was a member of the Mt. Sinai Hospital visiting staff, and a member of the courtesy staffs of the Hartford Hospital and St. Francis Hospital. Just recently, when the need for help became acute at the McCook Memorial Hospital, he volunteered to help in the emergency.

A devoted physician, husband, father, and grandfather—he will be missed by all who knew him.

Manuel Hirshberg, M.D.

In Memoriam

Cox, Ralph B.—Collinsville; McGill University School of Medicine; practiced general medicine in Collinsville for 59 years; his ambition to be "just a country doctor" was awakened through his observation of medical practice by the physician in his native community of Kingsport, Nova Scotia, where his father was a ship builder; he spoke of his boyhood ambition at a gathering of 1500 townspeople to celebrate his 50 years of medical practice September 21, 1952, when he told them at the Canton Elementary School: "I have always believed that anyone could be what they set out to be in this world. The height of my ambition was always to be just a country doctor."; died at his summer home in Kingsport, Nova Scotia, following a long illness, aged 84 years.

Solley, Frederick W.—Ridgefield; Columbia University College of Physicians and Surgeons, 1921; Dr. Solley was associate attending surgeon at St. Luke's Hospital, New York City, until 1959, when he became a consulting surgeon; he was assistant attending surgeon, Baby's Hospital, New York, from 1925-1935, and associate attending surgeon from 1935-1938; he also served for several years, 1935-1938, as chief of the Children's Surgical Service at the Vanderbilt Clinic in New York; early in 1959 Dr. Solley moved his practice from New York to Ridgefield; died at Danbury Hospital September 10 after a month's illness, aged 65 years.

McGovern, Edward P.—Bridgeport; New York University College of Medicine, 1901; practiced medicine in Bridgeport from 1902 until retirement following a surgical operation a year ago; he was a former medical examiner for the Veterans Administration in Bridgeport and served in France during World War I as a captain in the Army Medical Corps; Dr. McGovern was a past exalted ruler of the Bridgeport Elks Lodge; he served for a number of years as a member of the Bridgeport Board of Education; died at his home October 1, at the age of 86 years.

New Warning Label For Phenindione

The Food and Drug Administration of the U.S. Department of Health Education and Welfare has issued a warning against the dangers in the use of phenindione, a synthetic anti-coagulant drug.

Blood dyscrasias, agranulocytosis, hepatitis and hypersensitivity reactions are some of the dangers to be looked for. A warning of the dangers will accompany every package as follows:

"Warning: Agranulocytosis and hepatitis have been associated with the use of phenindione. Patients should be instructed to report promptly prodromal symptoms such as marked fatigue, chill, fever, and sore throat. Periodic blood studies and liver function tests should be performed. Use of the drug should be discontinued if leukopenia occurs or if evidence of hypersensitivity, such as dermatitis or fever, appears."

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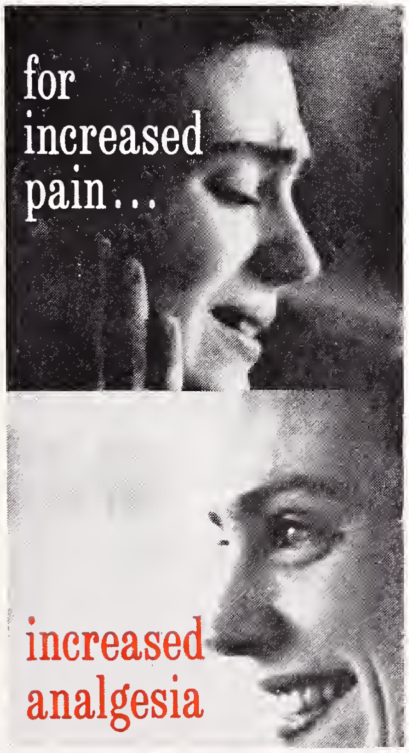

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ARE WE GETTING THROUGH TO OUR CANCER PATIENTS?

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A cancer patient depends upon his physician's help during the many phases of his illness. Other essential people and agencies contribute to his well-being. However, it is my belief that the family physician must be the principal guiding force. To assume this responsibility, he must have a tremendous depth of understanding and a sympathetic approach to the many complicated situations facing the cancer patient and his family. The physician must not only know all this, but he must also attempt to communicate his understanding to those involved.

THIS situation certainly is not unique to the cancer patient. American physicians traditionally have experienced a close personal association with their patients that transcends the mechanics of medicine and involves the doctor in caring about his patient as a person as well as caring for him medically. Having established this tradition, we must cherish it by trying even harder to give superior personalized medical care to all Americans. We must not only give superior care, but also let our patients know the true value of it through efforts toward mutual understanding.

The contributing authors are presenting phases of the cancer problem that stress current cost, actual clinical care, personal feelings, and research relating to the cancer patient. Much of these data are not new. But it is believed that, as a whole, these thoughts may help all of us get through to our patients that superior medical care can only be obtained through knowledgeable efforts of a team of people, whose chief guiding force is a well-informed family physician.

CANCER RESEARCH

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EDITOR'S NOTE:

Research, if scientific and honest, is one of the greatest means available to the medical profession in building a force to keep man well. Advances in research may go so far as to conquer the forces of disease before they befall us.

Dr. John R. Heller presents us with a most informative treatise on scientific and phoney research.

Samuel Coleridge once wrote, "Men whose dearest wishes are fixed on objects wholly out of their own power, become in all cases more or less impatient . . . "

Thus it is with the public who are concerned with the problem of cancer; they look to science to solve this terrible riddle; they seek assurance that the threat represented by cancer can be lifted from them. In a word, they become impatient.

This impatience of people is a two-edged sword. It provides a motivating force to the whole movement to find methods of control and at once presents problems to the doctor and the scientist in his relations to the public.

The danger of promising more than we can deliver is becoming a real one. In an honest effort to report progress on the research front, the researcher has responded to urgent pleas from the laymen to keep him informed through all the media. Because it frequently becomes necessary to over simplify what is in truth a terribly complex subject, legitimate reports of research achievements are misinterpreted or exaggerated into greater significance than the work warranted.

As a result, it sometimes appears that science is on the verge of solving for all time the cancer problem. It is terribly difficult to refute this because of the eager hope that is portrayed by those who wish it so. Within the minds of the many who are devoting their lives to the conquest of malignant diseases, this hope is constantly at hand. Intellectually one also is persuaded that the final stroke *might* fall at any moment though the best judgment of science is that the end may indeed be far off. What face can the doctor present to the public in such an enigma? The best one, perhaps, is that which would reflect a comprehensive knowledge of where we are today in this historic and dramatic venture; to reiterate the goals and to point to many of the triumphs, risking, if you must, the chances of over-optimism

That much has been done to reach these goals is demonstrated by the mounting cure rate of cancer and this without a final and decisive breakthrough on the research front. What has accumulated, however, are hundreds and perhaps thousands of small victories which taken together comprise a vast new knowledge of the phenomenon of biological growth. The tempo at which this knowledge is increasing is in itself growing at an enormous rate. Every new fact now elicits scores of new avenues which need exploring until the whole broad spectrum of knowledge about this problem proceeds in geometric progression.

The search for the final answers of abnormal growth is narrowing. It may even be true that decisive answers are very close to realization. Over the past two decades a great scientific debate has developed, slowly at first, but now with increasing tempo, as to the biology of the malignant cell. Geneticists have been strong proponents of the theory that cancer cells were products of mutation; endocrinologists maintain that at least certain tumors result from hormone imbalance and it has been demonstrated that some cancers of the reproductive system respond to endocrine influences; epidemiologists and biometricians have accumulated a vast evidence of the effects of carcinogens and environmental influences including radiation; and virologists with solid evidence of viral etiology in certain species of animals have recently induced abnormalities in hamsters with a virus isolated from human tumor cells grown in vitro. Literally scores of other findings and other theories have appeared, some to be discredited and some merely to remain as postulates unsupported but not disproven. Such provocative ideas as the Warburg concept of cancer's origin being due to a damaged oxidative system, demonstrated by a decrease in oxidative and increase in fermentative metabolism, have stimulated other research although failing to provide definite answers in themselves.

In the light of all this it may appear that there is conflict among the varying possibilities of the origin of cancer but at the same time it is possible to postulate that there is a great orderliness in the processes of growth and a pattern and symmetry among the variety of carcinogenic forces that disrupt the cell's normalcy. When one views the little that is known about the immune reaction, there is a temptation to look here for the common denominator which may exist in correlating these theories into a generalization. Does the occurrence of malignant growth represent a failure of these immune processes at a cellular level regardless of extracellular forces mediating carcinogenesis? This is but one of scores of questions to be answered but the means for exploring such a possibility and the numerous other questions relating to the existence of antibodies in the presence of human neoplasms now exist. This, along with all the other research in etiology, in chemotherapy, and other possible approaches to control of growth have reached proportions that stagger the mind.

The magnitude of this research assault has been measured in terms of dollars, of manpower and sometimes in results, as demonstrated by the profusion of papers published in every type of professional journal. It is impossible, however, for any one person to assimilate, digest, or interpret this veritable inundation of scientific information emanating from research on cancer today. Despite our best efforts to improve channels of communication, it is evident that the endocrinologist and the biochemist do not always understand each other and frequently both look upon the physicist as speaking in a foreign tongue. And when it comes to the clinician, the likelihood of his being well-informed of progress in fundamental research is rather remote. There seems to be no easy solution to this dilemma and it may only solve itself with the final solution to the whole problem of cancer. Nevertheless, this lack of better communications poses difficulties which sometimes have unusual ramifications, not the least of which is the terrible burden of untried or unproven cancer remedies. Some of these which are obviously products of the quack are being dealt with by governmental agencies, but others, more sophisticated, dwell on the edge of legitimacy and create great hardships for both the patient and the medical profession.

At such a treatment and research center as Memorial Sloan-Kettering Cancer Center in New York City, the staff often must grapple with such problems. Patients who have had experience with charlatans are sometimes seen here or staff members are occasionally consulted by relatives of cancer patients to inquire into the efficacy of unproven or useless nostrums. The resources of a large institution are helpful in putting into proper focus the false claims of cancer "cures."

Occasionally, the family doctor is unwittingly a party to furthering the tragedy of unproven treatments. Petitioned by frantic relatives and urged to give some unproven chemical a try, he sometimes goes against his better judgment and communicates with the producer of the nostrum. He may do no more than write a letter but even this is enough. Such letters are carefully preserved against the day when they may be helpful in publicity or for other occasions to further the claims that a questionable compound is at least being considered by the medical profession. Then to go further than this, as some doctors do in rare instances, gives the quack ammunition which is invaluable in contending that he has a compound or a method of treatment that will ultimately cure cancer. He may only say that it is "helpful" now, but his goal is to whip up a lot of interest in getting the substance tested.

The immense hue and cry that purveyors of obviously useless drugs create is not in the least an honest desire to see their potions given an objective scientific test. They know full well that the chances of its reaching the testing stage are far removed because such charlatans have not complied with any of the criteria necessary to make such tests practicable.

One of the easy questions is "Why not test it and be done with it?" The considerable cost in time and money that tests require is seldom realized. The battery of physiological measurements on patients during trial therapy is almost limitless and requires the facilities of a major cancer institution. Time alone is a limiting factor. For instance some studies such as the analysis of degradation products of certain hormones can require a full year. Toxicology and pharmacology also are mandatory and vastly time consuming.

The availability of patients and the ethics of using them for "in vivo" experiments require careful consideration. It is highly improbable that a doctor will be willing to submit his patient for experimental treatment with an unknown compound when there is any chance that other bona fide therapy might still be helpful, even if the patient himself is willing to undergo such an experiment.

The odds that there is a cure for cancer, or even a practical palliative, lying around unused are altogether nil. Every honest and reasonable effort to cure cancer gets a practical trial. One may reasonably conclude that development of any spectacular curative method for malignant disease would arouse such response as to demand attention immediately.

More trying, of course, are the peripheral treatments—those which are sanctioned by seemingly reputable physicians or scientists and which appear to mediate some subjective, if not objective, response in a limited number of cases. In these instances the expense of a full-scale trial may be necessary to deter the continuing pressure of certain groups to make use of such methods or compounds. In the meantime the public is led to believe that organized medicine, scientific groups, and cancer organizations are all conspiring to keep a life-saving compound from being employed.

This technique of attacking legitimate medicine is a calculated defense, perpetrated by those who gain financially through the tragedy of cancer. One estimate of the annual "take" that quackery extorts from cancer patients is in the neighborhood of $100,000,000. Although a fair observer might assign misguided motives to a few engaged in this nefarious trade, the prime objective is to make money from the misfortune of those dreadfully ill with cancer.

Aside from the financial drain for worthless remedies, more tragic is the fact that cancer patients who might be cured undergo the ministrations of medical sorcery only to learn too late that they are in the terminal stages of the disease. Even those who turn from valid medical treatment in response to glib promises of a "brand new cure" are shortening their lives although their disease is already widely disseminated. Who wants palliation when Dr. Buncombe promises a cure?

But the responsibility for quackery is not a one-sided situation. People bearing the psychological burdens of cancer will turn in desperation to resources that normally they would realize are fantastic. The physician who treats cancer must recognize his patient's need for continued total care regardless of how advanced and clinically hopeless the case may be. In its advanced terminal stages, cancer demands of the doctor the last full measure of devotion the healing arts may offer. To do less presents one more opportunity for the quack to seize upon.

To meet and solve the problem of unproven and worthless treatment in cancer calls for concerted action on the part of the public, the medical profession, and the government. All of these are being recruited to combat this menace. The American Medical Association and the American Cancer Societies have active committees concerned with informing the public and improving legal measures to protect the cancer patient from the dangers of quackery.

New laws in at least three states, California, Kentucky and Nevada, have established cancer advisory councils or similar groups under state departments of health to regulate new or unproven cancer remedies and compel the registration of all who attempt to treat malignant diseases in any manner whatsoever.

Only a few states are adequately equipped to deal with quackery and so long as cancer remains the second most frequent cause of death or even a major cause of suffering, it will attract the medicine show swindler, the con man, and the extortionist to feed on the misfortune of those ill with cancer.

As progress toward the conquest of this disease is made, through both an improved cure rate from the present modalities of surgery and irradiation and a final means of control over all neoplasms, one thing must remain unchanged — the doctor's concern for his patient, his relationship of bringing to the bedside the best of intent, the newest of proven treatment, and the finest of himself.

THE GOVERNMENT'S ROLE IN THE OVERALL CANCER PROBLEM

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EDITOR'S NOTE:

Dr. Kenneth Endicott has contributed a tremendously vital facet of the overall approach in the attack against cancer. The necessity for intelligent mobilization of physical and mental facilities in the cancer fight is a must. His article gives us insight into a most important program.

THROUGHOUT recorded history man has used the power of government against the dread diseases. As knowledge of disease etiology grew, government action changed from ritualistic to realistic and the results from imaginary to real.

The past half-century has seen a great flowering of organized national public health programs against the infectious diseases. These programs have combined research, public education and occasional use of police power to bring under control and in some cases virtually to eliminate from the civilized world most of the dangerous contagious diseases. To achieve this it was often necessary to undertake major modifications of the community environment or to enforce community-wide immunization programs and it became accepted practice to finance such activities with public funds.

It was, therefore, not surprising that the American people turned to the Federal Government for action against cancer when that disease climbed to second place in the mortality tables.

The National Cancer Institute

Recognizing that lack of knowledge about the disease made it difficult to undertake a direct attack, the Congress enacted broad legislation creating the National Cancer Institute in 1937. This legislation — the National Cancer Act -- authorized the Institute to:

(a) conduct, assist, and foster researches, investigations, experiments, and studies relating to the cause, prevention, and methods of diagnosis and treatment of cancer;

(b) promote the coordination of researches conducted by the Institute and similar researches conducted by other agencies, organizations, and individuals;

(c) provide training and instruction in technical matters relating to the diagnosis and treatment of cancer;

(d) provide fellowships in the Institute from funds appropriated or donated for such purposes;

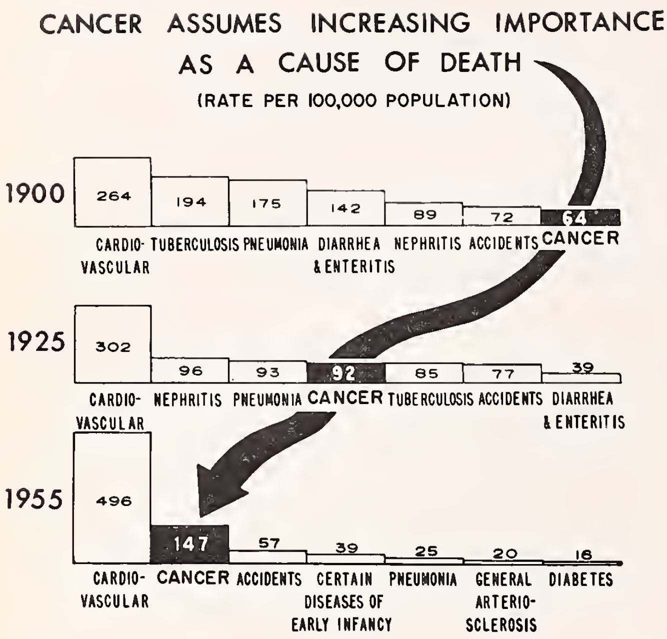
(e) secure for the Institute consultation services and advice of cancer experts from the United States and abroad;

(f) cooperate with State health agencies in the prevention, control, and eradication of cancer;

(g) procure, use, and lend radium as provided in section 403.

Despite this broad authority, the Institute started slowly. Two small laboratories, one of Harvard Medical School and one at the old Hygienic Laboratory of the Public Health Service, were combined and moved into a modest laboratory building in Bethesda in 1939. A vigorous program of basic research was begun and a token program of fellowships and research grants launched. The build-up of staff and budget was halted by World War II.

Immediately after the war, under the leadership of Dr. Leonard A. Scheele, there was a sweeping reorganization of the Institute and the major outlines of the present broad programs were set. To the basic laboratory research program were added clinical research and field investigations. The training program in research and clinical oncology was expanded. Grants-in-aid for improvement of undergraduate education in cancer were initiated in medical and dental schools. Grants for construction of cancer research facilities were made. A program of field demonstrations supplemented by grants to States for cancer control was started. And perhaps most significant of all, the decision was made to throw major support into research grants in order to make use of the full cancer research



CANCER ASSUMES INCREASING IMPORTANCE AS A CAUSE OF DEATH

(RATE PER 100,000 POPULATION)

potential of the United States. A modest beginning was made in the support of cancer research in other countries

Since 1946 there has been a steady growth of these various programs except for construction grants, which were halted by the Korean War and not resumed until this year. Another major program—the chemotherapy program under the Cancer Chemotherapy National Service Center — was initiated in 1955. This is a drug development program financed through contracts, especially with the pharmaceutical companies, and through grants for cooperative therapeutic trials of new drugs.

In 1960 a new program for development of viral diagnostic reagents, virus-free tissue cultures and virus-free animals was instituted as a means of accelerating the exploration of viral etiology of cancer. In the spring of 1961, another new program of support for training and research in therapeutic radiology was begun. By the end of June 1961 the annual expenditures of the National Cancer Institute were approximately $110 million for all of its programs.

Other Federal Cancer Programs

Although the Cancer Institute has the most extensive cancer program in the Federal Government, there are three other agencies with substantial and important programs.

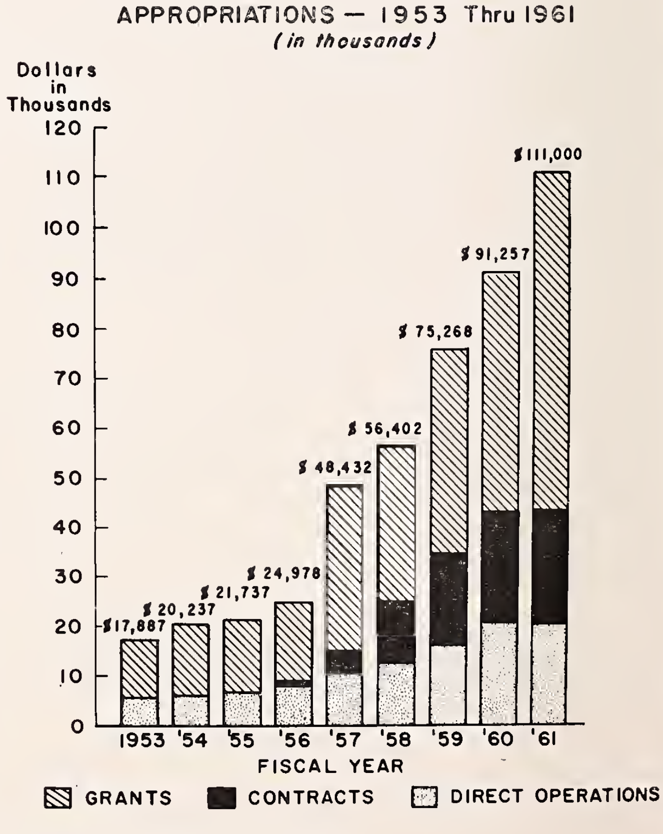
The *Atomic Energy Commission* operates combined clinical and basic cancer research programs at the University of Chicago, at Oak Ridge and at Brookhaven. In addition the AEC supports university research in radiation therapy and in radiobiology as it relates to cancer, and, perhaps most important, provides isotopes for research, diagnosis, and therapy.

The Veterans Administration conducts extensive clinical research in cancer therapy and represents a great national resource for clinical studies. The VA hospital census of cancer patients averages over 5,000, the various hospitals work well together, and there is an excellent records system. The VA also participates extensively in broad epidemiologic studies such as those on the relationship of smoking and lung cancer.

The third major Federal program—and one of ever increasing importance—is that of the *Food and Drug Administration*. The FDA is increasingly engaged in the problem of eliminating carcinogenic substances as food additives. This involves extensive testing, interpretation of data, and enforcement of the Delaney Amendment. This difficult and controversial area will grow in importance as our chemical technology advances. Another program of growing importance is the regulation of manufacture and distribution of the increasing variety of anticancer drugs emerging from the intensive chemotherapy research program in the United States.

The Growing Federal Role

The total national effort against cancer has increased spectacularly over the past two decades. This has been made possible through support from many sources in addition to the Federal govern-



APPROPRIATIONS — 1953 Thru 1961
(in thousands)

NATIONAL CANCER INSTITUTE

ment. The largest and best known of non-Federal sources is the American Cancer Society which has steadily increased its contributions to a level of almost $30 million per year. A number of other voluntary health organizations have made increasing contributions and the list of private donors grows daily. All State governments appropriate funds for cancer control and several States operate large cancer research institutes. All medical schools and many universities support cancer research and education.

For a time the increase in these non-Federal sources kept pace with the Federal contributions but beginning about 1957 the Federal support began to pull ahead.

The growing predominance of NCI funds has resulted from the evident determination of Congress to press forward the attack to the limit that this can be accomplished with funds, and not to restrict the rate of Federal growth to the growth rate of other sources

Already it is evident that the very size of the Federal program will require new methods of administering research grant funds. There are now 1800 active research grants from the National Cancer Institute. This constitutes a heavy burden for our advisory bodies, which must review every grant application, and cannot be expanded indefinitely. One partial solution is to provide a portion of the funds as institutional grants so that detailed decisions can be made at the institutional level. Another is to make large grants to departments in lieu of many small grants to individuals within those departments. We are already experimenting with such administrative devices.

A Guess At The Future

It seems likely that present trends will continue for some time and that NCI support of cancer research may ultimately exceed 75 per cent of the total national support. If so, this will create many new administrative and policy problems now dimly perceived. It is to be hoped that satisfactory solutions to these problems will be found.

It must be remembered that along with the growth of the national effort in cancer research and training there has been similar growth in other fields of medicine and public health such as cardiovascular disease, mental health, neurological and sensory disorders and the rheumatic and metabolic diseases. Here, too, Federal funds administered by the Public Health Service have predominated, but with substantial growth in financing from non-Federal sources. Obviously, the principal recipients of these funds have been the same research and training institutions that are depended upon for most of the cancer effort.

An idea of the rate of growth and present size of the total program for the support of non-Federal research, training and control activities in all these fields may be obtained from the fact that National Institutes of Health expenditures alone have grown from approximately $37 million in 1950 to over $453 million in the 1961 fiscal year.

This massive growth has presented the nation with many complex problems involving fundamental relationships of the Federal government, science and the universities. These problems are under intensive study by the Public Health Service, the Congress and the scientific and academic communities.

It is well to clarify our ideas by asking for the precise meaning of our words and to try to check our favorite ideas by applying them to accurately formulated propositions.

—M. R. Cohen and E. Nagel,
Introduction to Logic and the Scientific Method

THE CLINICAL CARE OF THE CANCER PATIENT BOTH CURATIVE AND PALLIATIVE

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EDITOR'S NOTE:

It is extremely difficult to keep abreast with the rapidly changing therapeutic attack on the many cancers developing in our patients. Dr. Copeland is one of the few physicians endowed with that rare type of ability. To this ability is attached the even more rare gift of being able to communicate his knowledge simply and forcefully to his fellow physicians. This he has done in the following article.

The annual incidence of cancer in this country has been estimated at 785,000 cases for 1961. There will be approximately 510,000 new cancer cases this year. Currently, one out of three patients with cancer is being successfully treated. The reported number of patients dying of cancer in the United States for 1959 was 259,090, or about one out of every six deaths. Such figures indicate the enormity of the problem which confronts us in caring for those patients who cannot be cured of their disease.

The problem is further complicated by the fact that, while all cancers have in common the fundamental process of uncontrolled new growth, from other points of view they behave in different ways. On the basis of incidence, life history, causative factors, aggressive tendency, symptomatology, problems in diagnosis, method of treatment, response to treatment and prognosis, they suggest different diseases.

The estimated national percentage of cure as presented at the Fourth Cancer Conference in Minneapolis, September, 1960, ranged from a high of 93 per cent for skin cancer localized to the area of the lesion, down to 5 per cent in lung cancer where regional lymph nodes were involved. In a report by Steiner (1952), it was noted that the national average showed a 20 per cent five-year cure rate for all cancers of the breast (early and late) and less than 1 per cent for cancers of the pancreas. Reports from some individual physicians, clinics and hospital groups give better survival rates than those presented in the national average.

The primary aim in treatment of any cancer patient is the complete ablation of the disease. To this end, various forms of treatment are employed singly or in combinations, with varying degrees of success. The cures have been largely in the localized and accessible tumors. The disseminated and less accessible tumors make up the bulk of inoperable lesions which require a palliative approach to treatment. With research, the attack on uncontrolled cancer is slowly changing the complexion of this most difficult problem. Progress, while slow, has consisted of a series of small victories, adding a few per cent here and there to survival rates. This in no way precludes, however, the possibility of sudden and dramatic advances in cancer control.

Progress in dealing with the cancer problem must not be measured solely by the cure rate, but also by the advances in palliative therapy. Gratifying progress has been made in extending useful life and rendering patients who have inoperable cancer more comfortable. Prolongation of active life up to five or more years in some patients with prostatic carcinoma by antiandrogen therapy is an encouraging milepost, and is significant because it arouses hope that, with slightly more effective therapy, cures may be achieved. The disseminated forms of cancer have proved susceptible to ablation through clinical and basic research. Nobody can predict from what source the next advance will emanate, but surely it will come.

In effecting cancer control, immediate practical measures include the following objectives:

1. To detect early and remove premalignant lesions.

2. To diagnose and manage existent cancer in the earliest possible stage.

3. To be effective and proficient in applying the most advanced methods of curative treatment — surgical procedures, x-ray treatment, or chemotherapy.

4. To apply adequate palliative measures against uncontrolled lesions, with the aim of rehabilitating and prolonging useful life, giving relief of pain and, by an empathic approach, to lend encouragement and otherwise create good morale in such patients.

The attempt at adequate treatment for cure may be but the beginning of a period of successful palliation. Conversely, aggressive palliation may be quite rewarding in the cure or arresting of the disease for long periods of time.

A discussion of the objectives cited above will encompass the parameters of the problems involved in attacking a disease that, like heart trouble, cannot be cured at times. These are problems which must be approached in an aggressive manner but, at the same time, avoiding the unhappy possibility of using extensive or debilitating procedures or drugs which may shorten life without cure or even palliation.

Early Detection And Removal Of Premalignant Lesions

By premalignant lesions is meant those tissue changes which deviate from the normal, and which are known to be associated with the development of cancer, or in which cancer is more often an added phenomenon. For example, pigmented moles or certain types of changes in the breasts of women (mammary dysplasia) appear to have a higher incidence of cancer associated with them than is noted among statistically comparable individuals in the general nonaffected population.

In the belief that there is often a causal relationship between benign neoplasms or certain abnormal tissue changes which exist about the body and the development of cancer, it becomes important to remove them. It is to be realized that some suspicious changes may be neither precancerous lesions nor cancer. Experience dictates, however, that because such related processes do occur many times, it is better to remove surgically the suspicious nodule, mole or polyp for study by a pathologist. By so doing, we often may avoid the occurrence of cancer or "nip the disease in the bud", with adequate treatment. Routine periodic physical examinations of a thorough nature are necessary to reveal many such early changes. Do not delay in having any unusual blemish, lump, sign, or symptom investigated.

As facts accumulate through research in the fields of steroid metabolism, viruses and immunochemistry, a pattern should begin to emerge whereby we can seriously plan the prevention of all cancer, rather than concentrate on the treatment of patients with premalignant lesions or established malignant tumors.

Diagnosis And Treatment Of Existent Cancer

It is generally true that the earlier a malignant tumor is diagnosed the greater the chance to eliminate it by adequate treatment. The same rules should obtain for detecting early cancer as those advocated for finding precancerous lesions. Such rules encompass a cancer check up, which includes a systematized physical examination, a screening history to gain an adequate background of the patient and appropriate laboratory and x-ray studies in addition to a search of body cavities by endoscopic studies where possible.

The physician can accomplish most of the examinations needed in his office. Roentgenographic and laboratory studies often can be done best by specialists in well equipped laboratories or x-ray departments. No longer can the doctor and the patient "wait and see". Good prognosis depends on early diagnosis.

Cancer detection methods, including formal surgical biopsy, are varied and have been frequently reported. Exfoliative cytology deserves special mention, as rapid advances have been made in the last decade in the collection and study of exfoliated cells from body cavities, tissues and fluids. Its general acceptance as a screening test is assured and is now in widespread use. The most important application of exfoliative cytology is the detection of early cancer prior to the appearance of clinical manifestations of the disease. Secretions containing exfoliating cells from various parts of the body including smears from the uterine cervix and canal, secretions from the nasopharynx, washings from the bronchi, pleural and peritoneal cavities as well as the bowel tract, etc., are screened for cancer. This test has added considerable responsibility to the program of physicians.

The lack of interest on the part of the public and some physicians must be overcome so that methods of treatment available for cure of cancer patients can be applied at an early stage, through prompt diagnosis of lesions often asymptomatic and still localized.

Surgical And Radiotherapeutic Treatment, Adjuvant Chemotherapy

Surgical and irradiation therapy remain the two principal methods of freeing the patient of his disease.

Surgical treatment utilizing the application of present day physiologic principles has permitted the patient suffering from cancer to be conducted safely through increasingly radical operative procedures. The advances in our knowledge of anatomy and physiology have extended the scope of such operative procedures and offer a reasonable prospect of removing the disease in more individuals and salvaging such patients as comfortable, useful citizens.

Sound surgical judgment is paramount in making a decision as to the surgical risk and as to the reward to be gained. A cooperative patient with the will to live is a necessary ingredient of the decision to operate. The surgeon should be specifically qualified and experienced. Adequate consultation and preoperative preparation are important factors for successful treatment. Removal of a lung, a portion of the liver, major exarticulations, etc., can be accomplished for cure, providing the preoperative extent of the disease and the physical status of the patient are found acceptable. Some necessary operations are of such magnitude that they should be attempted only at centers where adequate facilities are available.

Irradiation is the other important therapeutic modality that we have for both definitive and palliative treatment of cancer.

The use of ionizing radiations covers a wide variety of sources and methods of application.

Radiation Therapy Sources And Methods

A. External Ionizing Radiation:
  1. X-rays with energies of from 50,000 to 3,000,000 volts.
  2. Gamma radiation from radium, cobalt (Co^{60}), and cesium (Ce^{137}).
  3. Rotation beam therapy.
  4. Multiple portal or cross-fire irradiation.
  5. X-ray grid therapy.
  6. Electron, proton and neutron beams.

B. Intracavity Radiation:
  1. Radium or radon in appropriate applicators.
  2. Artificial radioisotopes as cobalt (Co^{60}), phosphorus (P^{32}) or sodium (Na^{24}) in appropriate applicators.
  3. Radioactive colloidal gold (Au^{198}).

C. Interstitial Radiation:
  1. Radium, radon, radioactive isotopes.
  2. Radioactive cobalt in nylon tubes (used as long sutures through tumor).
  3. Colloidal isotope: gold (Au^{198}).

D. Internal Radiations Given By Mouth or Parenterally:
  1. Phosphorus (P^{32}).
  2. Iodine (I^{131}).
  3. Sodium (Na^{24}).
  4. Colloidal gold (Au^{198}).

Ionizing radiations produced by x-ray tubes may be used as an external source for irradiating tumors within the body. The energies available today vary from 50,000 volts to 3,000,000 volts. Portals of treatment and energies used vary with the site and type of lesion present. Portals may vary from 1 cm. to those which encompass the entire body.

Rotation beam therapy permits the management of a lesion by large quantities of ionizing irradiation, but with much less skin dosage. This is accomplished by the use of equipment which rotates the x-ray tube or rotates the patient in such a way that the tumor-bearing area becomes the axis about which the patient or the tube rotates.

Other external sources of ionizing irradiation include telecobalt (Co^{60}) and cesium (Ce^{137}) therapy, radium or randon packs, and electron beam therapy.

The properties of radioactive cobalt make it a suitable isotope for external and interstitial radiation therapy.

Cesium (Ce^{137}) has a half-life of 37 years and emits both beta and gamma irradiation. Because of its abundance in the present atomic energy operations being carried on in the United States, investigations have been under way to utilize cesium successfully as a substitute for radium and cobalt as an external source of ionizing radiation.

Betatron sources of high energy are being used successfully for penetrating irradiation of deeply situated cancers.

Sources of ionizing irradiation to be inserted in the body cavities by suitable applicators or applications usually include radium or radon. More recently, radioactive cobalt and other isotopes, such as radioactive gold, have been made available for this purpose. This method of application has a wide range of usefulness in the vagina, cervix, uterus, nasal passages, thoracic cavity, etc.

Interstitial irradiation, by means of needles or seeds containing radium, radon, cobalt and such radioisotopes as colloidal radioactive gold, may be introduced into the tumor-bearing area.

While all of the many sources of ionizing radiation and their application have a place in treating the cancer patient, it has become evident that the high energy ionizing beams used in external "supervoltage" therapy have a distinct advantage in penetrating deeply into the body with less damage to normal structure along the path of the beam. This advantage affords an opportunity to manage such lesions as carcinoma of the lung, bladder and malignant tumors of the female pelvis more effectively. At The University of Texas M.D. Anderson Hospital and Tumor Institute, this modality of therapy, as an external source of irradiation, has become routine as a part of the treatment of patients with carcinoma of the uterine cervix, lung and urinary bladder.

Adjuvant Chemotherapy: Tumor cells disseminate through lymphatics, blood vessels, along organ lumens and by exfoliation into body cavities. They may be spread by the physician and surgeon during examination, diagnostic procedures and operative manipulations. Tumor cells can be isolated from the peripheral blood of patients with malignant disease and from the veins draining the primary tumor. Examination of washings from the body cavities indicates that cancer cells commonly exfoliate. These observations prove the need of care to prevent the iatrogenic spread of malignant cells, and are worthy of attention because of the chemotherapeutic possibilities of preventing metastases through *adjuvant chemotherapy*.

Chemotherapy is now being used intravenously and by wound washing in an effort to decrease the likelihood of metastatic spread. Chemotherapeutic agents administered by the perfusion or infusion technique are less likely to produce systemic toxicity, and they introduce a higher concentration of the drugs into tumor tissue. When such agents are used in conjunction with irradiation, there are instances where the irradiation dosage may be decreased by a half—(Reese et al. in The Treatment of Children with Retinoblastoma).

Palliative Therapy

Many disciplines have contributed to the palliation of cancer patients, including the use of (1) chemotherapeutic, (2) endocrinologic, (3) surgical, (4) radiotherapeutic and (5) general medical supportive measures.

1. *Chemotherapy*. There is no clinical compound at the present time which can cure patients with all types of disseminated cancer, but there are groups of agents available which are of value in the clinical management of specific neoplasms.

Chemotherapeutic agents may be broken down into alkylating agents, antimetabolites, antibiotics and other miscellaneous agents, such as urethane and derivatives from the alkaloid colchicine. Examples of application of such drugs follow:

A. Alkylating agents are used in treating patients with malignant lymphoma, breast cancer metastases, chronic leukemia, polycythemia vera, lung carcinoma, choriocarcinoma, melanoma, Wilms's tumor, carcinoma of the testis and certain malignant tumors of the soft parts.

B. Urethane is used in treating patients with multiple myeloma.

C. Actinomycin D is used in treating patients with carcinoma of the testis and Wilms's tumor, in conjunction with one of the alkylating agents.

D. Antimetabolites are used in treating patients with acute leukemias, ovarian, testicular, uterine and colonic carcinoma.

1. Methotrexate (Amethopterin), an antifolic acid compound used in acute leukemia, deserves special mention because of its effect on tumors of trophoblastic origin. There are a number of patients with choriocarcinoma who are apparently free of disease for three or more years after such treatment. Breast carcinoma and pelvic metastases from carcinoma of the cervix occasionally respond to methotrexate.
2. Pyrimidine Analogs, 5-fluorouracil and 5-fluorodeoxyuridine have shown some promise in treating patients with carcinomas of the colon and ovary.

There is a large and evergrowing field of chemistry as applied to cancer chemotherapy. Thousands of new compounds are developed annually both here and abroad. Screening these compounds for anticancer cell activity is a prodigious effort, and only a small number of agents are ultimately found useful for clinical trials. Valuable inroads, nevertheless, have been made with cancer chemotherapy, and progress will continue as we learn more of the basic mechanisms of drug action of these agents and their effects on tumors. What we need to avoid is the promiscuous clinical use of such compounds, without sufficient reason, in treating an extremely sick or dying patient. We also need to avoid new and unproved drugs which have not been duly screened by acceptable methods, whose contents are not known and which have not had careful clinical evaluation before use. Nothing is to be gained.

Chemotherapy should be used judiciously alone, or in combination with other modes of therapy, with the objective of improving the patient's comfort and physical status.

2. *Endocrine Therapy*. An increasingly large body of knowledge, brought about through research and clinical trial, has crystallized the significance of hormones as regulators of growth processes through their actions as modifiers of cellular enzymatic reactions. A more direct relation to cancer is apparent in the effects of increased clinical administration or withdrawal of selected steroids on certain malignant tumors in the human being. At the present time, sex hormones are widely used in the treatment of patients with carcinoma of the prostate and breast.

In management of *prostatic carcinoma* with metastases, knowledge of endocrine control is based largely on the studies of Huggins and also of Herbst.

Neither orchiectomy nor estrogen therapy is fully ideal. The inhibition of androgens by diethylstilbestrol is not complete, and the former are effectively depressed only while treatment is being employed. Many investigators feel that five-year control of inoperable prostatic carcinoma is most effectively obtained by the concurrent use of orchiectomy with estrogen therapy as the primary form of treatment, while others reserve castration for subsequent therapy, to be used only when reactivation of the tumor becomes apparent. Carroll and Brennan report that combined therapy in fifty-three patients gave a longer period of survival than is obtained by either orchiectomy or estrogen therapy alone.

Carcinoma of the male breast, a rare disease, often becomes disseminated before it is discovered and before adequate therapy can be instituted. Orchiectomy may have definite palliative value. Estrogen therapy is of value. Adequate studies are not available for statistical analysis, but remissions of up to three years have been reported.

Carcinoma of the female breast. It seems appropriate, because of the frequency and magnitude of the problem, to sum up the palliative measures which may be used in handling advanced and metastatic breast carcinoma, by endocrine therapy and surgical ablation of ovaries, adrenal glands or hypophysis.

Testosterone therapy and ablation of ovarian function is recommended in premenopausal women, in the presence of demonstrable systemic disease. In women five or more years past the menopause, estrogen therapy is best used for soft part and lung metastases. The response to testosterone propionate does not appear to depend on the physiologic age of the patient and may be used to equal advantage in managing bone metastases in young and elderly women. An additional advantage includes controlling subjective symptoms, such as pain. These hormones may be given until reactivation of the disease occurs. Cessation of therapy may bring about another remission of the disease. Shifting hormone therapy from one kind to another may occasionally bring about successive favorable responses. Side effects of the drugs must be watched for, evaluated, and corrective measures taken. Proper evaluation of the patient should precede the decision to perform adrenalectomy or hypophysectomy.

The comparison of palliative results from hypophysectomy (31.3 per cent) with those for bilateral adrenalectomy (31.7 per cent), as carried out by the Joint Committee on Endrocrine Ablative Procedures, indicates that both are useful procedures in treating patients with metastatic breast carcinoma. It would appear that the selection of either procedure would depend on the facilities and experience available.

Carcinoma of the Thyroid. Unequivocal suppression of thyroid carcinoma by thyroid hormone has been reported in about 1 per cent of the patients treated. This effect is more apt to be seen in younger individuals with papillary or mixed papillary and follicular carcinoma. Lung metastases are most often the sites favorably affected. The hormone must be given in full maximally tolerated dosage.

3. *Palliative Surgical Therapy.* Surgical intervention is one of the chief methods for the ablation of cancer. Knowing that surgical and irradiation therapy can cure no more than 33 per cent of cancer patients, the physician must assume the responsibility of deciding when a case is curable, or whether surgical or irradiation therapy offers only palliation in terms of prolonging life, alleviating pain, or temporarily returning body functions to a relatively normal status. Each individual case must be evaluated on its own merits. Prolongation of life is an important objective in submitting a patient to surgical procedures, even when metastatic involvement is present. If the proposed operation only relieves the patient of suffering and distress, it is to be recommended. The surgeon, however, must weigh the undesirable possibility of shortening life, without the benefit of palliation, against the alternative of nonsurgical palliation.

It is impossible to cover the entire range of possible surgical palliative procedures, but a few of the more important and practical procedures not previously discussed will be mentioned:

A. Simple excision, in selected cases, for fungating, uncontrolled carcinoma located in breast, about the face, groin, etc.

B. Resection of various parts of the gastrointestinal tract, with re-establishment of a functional lumen in the presence of metastases.

C. Neurosurgical procedures, such as chordotomy and posterior rhizotomy, for relief of pain.

D. Fixation of certain pathologic fractures of bone following metastases, in addition to the use of roentgen therapy. Appropriate casts or traction apparatus may be used for fixation, in addition to nail fixation techniques or metal pins.

E. Decompression laminectomy.

F. Amputation of extremities for uncontrollable, painful and/or fungating neoplasms.

G. Removal of certain organs, such as kidney, bowel, thyroid lesions, etc., containing uncontrollable primary cancer, for palliation and temporary inhibition of metastatic growth.

H. Selected resection of regional lymph nodes with metastases to prevent fungation and/or painful and crippling edema, whether or not the uncontrolled primary tumor can be found.

I. Tracheostomy for inoperable obstructive lesions about the oral cavity, pharynx, larynx and neck.

J. Gastrostomy, gastroenterostomy, ileostomy or colostomy for inoperable obstructive lesions involving the esophagus, stomach and bowel.

There is a rising tendency on the part of surgeons to attempt the well-nigh impossible to restore the terminal cancer patient to health. The surgeon must bear the responsibility of ignoring the anatomic and physiologic implication of "supraradicalism" in an attempt to control cancer or to achieve palliation in the face of terminal disease.

4. *Palliative Radiation*: The sources of ionizing radiation and modalities of treatment have been previously cited. While radiation therapy may be curative in many cases, it also provides irreplaceable palliative relief to many patients. In the palliative care of malignant tumors, irradiation is of prime importance for: (1) relief of pain and discomfort; (2) reduction in tumor size; (3) prevention or treatment of pathologic fractures; (4) healing of ulcerations; (5) control of hemorrhage; (6) favorably affecting the course of lymphomas and many of the blood dyscrasias; (7) causing tumor growth restraint in disseminated cancer; (8) bringing about indirect hormonal effects, such as ovarian castration; (9) prolongation of useful life; and (10) improving the mental outlook of the patient.

Radiation therapy should never be given when it is obvious that no benefit will be achieved or that actual harm may result. Patients near death usually will not benefit because of the time delay in effecting beneficial palliation after treatment begins. Severe debility, cachexia and anemia mitigate against favorable response to treatment. A correction of these findings by supportive measures may salvage many of these patients for appropriate radiation treatment.

Certain tumor types and anatomic locations often preclude possible favorable effects from irradiation. Notable examples are: adenocarcinomas of the gastrointestinal tract, osteogenic sarcomas of bone, neurogenic sarcomas and many other forms of sarcoma, malignant melanoma, brain tumors of adult gliomal types and acute leukemia. *The lack of specificity in the localization of radioisotopes in tumor-bearing areas largely defeats their use in palliating the cancer patient.*

Great care in judgment must be exercised when considering the reirradiation of an uncontrolled tumor. The physical factors and total dosage of the previous radiation must be known. Here the risk of severe tissue damage is great and may not yield significant results, but often increases morbidity.

Many attempts at curative irradiation become palliative in the end. Palliative treatment often does not require the concentration of dosage that is necessary to destroy cancer completely. With moderate dosages of irradiation, relief of pain and the suppression of disseminated disease from a variety of primary tumors, such as cancer of the breast, thyroid and kidney, are considerable medical achievements. Significant palliation in treating patients with inoperable local tumors, lymph node metastases, inoperable bronchogenic carcinoma, pulmonary metastases, relatively localized lymphomas and chronic leukemia emphasizes the importance of radiation therapy.

High energy irradiation therapy from external sources:—(x-ray, betatron, linear accelerator, radium and cobalt)—has added a considerable degree of palliation not possible with the lower voltages. The advantages are principally related to better depth dose with less skin reaction and less radiation sickness for comparable depth doses.

Combined radiation therapy and surgical treatment of technically inoperable cancer has been a hopeful concept of the oncologist. In such cases the combination of radiation therapy and surgical treatment is essential, the irradiation converting a fixed fungating inoperable lesion into a resectable one. In many such cases, palliation only may be obtained but, in a few individuals, long-time survival without disease is accomplished.

5. *General Medical Supportive Measures.* The medical aspects of treatment assume great importance in those individuals where the tumor is inoperable or has become generalized, requiring palliation. Cachexia, anemia and general debility require immediate correction, if possible, through rectifying the fluid and electrolyte balance, giving of transfusions, intranasal tube feeding, parenteral feeding, increased vitamin intake, etc. The relief of pain does much for the patient's well-being. General medical palliation may include simply prescribing aspirin tablets or giving other non-narcotic compounds, such as meprobamate. If one finds that narcotics are necessary, a judicious attitude must be adopted, making every effort to avoid massive dosages to gain immediate relief. Trial of drug combinations with small dosages may bring about adequate synergistic action with relief of pain. The adverse synergistic effects of certain drugs must be taken into account. The more effective opiates in larger doses should be reserved for terminal cases with intractable pain. Addiction to narcotics can largely be avoided by the judicious use of chemotherapy, hormone therapy, irradiation therapy and/or surgical measures.

The problem of palliation is an individual one for every patient and requires a careful appraisal of the attitudes, both of the patient and the family. Sympathy for the patient and his problem, with a spirit of optimism, may serve to brace his morale and give him the lift upon which he may thrive from day to day. Whether a patient knows he has a malignant disease is not important. The vital question for the physician to answer is: has he conveyed a feeling of optimism to the patient about what he can do and is doing for him? The families of such patients must be thoroughly briefed and an air of courage and enthusiasm instilled into their demeanor. The treatment during the terminal stages deserves the same kind, optimistic attitude, using hospitalization when necessary, but with the utilization of adequate home care where possible.

From the standpoint of a service program to cancer patients in the various stages of the disease, the following summary of needs seems most important and none should be neglected:

A. *Detection of Cancer*
   1. Lay education
   2. Breast self-examination (periodic)
   3. Periodic physical examination by physician
   4. Periodic physical examination in a detection center
   5. Appropriate cytological smear examinations
   6. X-ray screening

B. *Diagnosis of Cancer*
   1. Diagnostic studies by private physician or clinic
   2. Tissue diagnosis
   3. Adequate records
   4. Periodic follow-up

C. *Curative Treatment* (Utilizing a composite of the following personnel and facilities)
   1. Cancer clinic
   2. Hospital facilities
   3. Surgeons, radiologists, internists, pathologists
   4. Nurses
   5. Radiation therapy
   6. Rehabilitation
   7. Follow-up

D. *Palliative Treatment*
   1. Chemotherapy
   2. Hormone therapy
   3. Surgical therapy
   4. Radiation therapy
   5. General supportive care
   6. Nursing care
   7. Social Service
   8. Volunteer services

E. *Terminal Care*
   1. Physician
   2. Nursing
   3. Home care
   4. Housekeeping
   5. Social Service
   6. Terminal Home care
   7. Volunteer services

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> *Scientific method is the only effective way of strengthening the love of truth. It develops the intellectual courage to face difficulties and to overcome illusions that are pleasant temporarily but destructive ultimately. It settles differences without any external force by appealing to our common rational nature. The way of science even if it is up a steep mountain is open to all. Hence while sectarian and partisan faiths are based on personal choice or temperament and divide men, scientific procedures unite men in something nobly devoid of all pettiness. Because it requires detachment disinterestedness, it is the finest flower and test of a liberal civilization.*
>
> —M. R. Cohen and E. Nagel,
> *Introduction to Logic and the Scientific Method*

EVALUATION OF A HOME CARE PROGRAM FOR CANCER PATIENTS

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EDITOR'S NOTE:

$6.47 versus $39.97 per day.

These figures are the cost of the care per day for a patient in the home care program in comparison with what it costs a similar patient per day in a hospital in the same community. With a hospital bed shortage, spiraling costs of medical care and the many other changes in patients' reactions to illness, Drs. Coffey and Potter have presented us with a very important phase of the care of the cancer patient.

The Georgetown University Medical Center Home Care Service for Cancer Patients has recently completed its tenth year of operation. An analysis of the activities of this decade has been made and it is believed that the results of this study may be of interest to those concerned with the management of incurable cancer patients.

The Home Care Program began operation at this medical center in March, 1950, as a result of an endowment from a private trust fund.

Objectives

The primary objective of this Home Care Program is to provide medical care and assistance to cancer patients in their homes. It seeks the humanitarian goal of providing this support while permitting the patients to spend their declining days in the familiar home environment, surrounded by family and friends.

The second goal of the Program is to free hospital beds that are occupied by cancer patients who require some degree of medical assistance but who do not need the full support of a hospital. This allows these hospital beds to be occupied by patients who are in more critical need of them.

The third objective is to establish a community facility providing continuity of patient care between hospital and home.

Another objective is to shorten the length of hospital stay of cancer patients and to lower the readmission rate of discharged patients. Teaching experience to medical, nursing and other professional students in environmental and home medicine is also achieved.

Organization

Personnel on the Home Care Team include the following: (1) Medical Director. The Medical Director functions on a part time basis and is responsible for coordinating the activities of the service. His duties include establishment of policy and procedural matters and the interpretation of these policies in application to the individual case. He is responsible for the acceptance or rejection of new applicants for the service. One of his prime functions is the establishment of liaison between the Home Care Team and the other medical resources in the medical center and the community. (2) Visiting Physicians. There are two visiting physicians on the Team who make visits to the patients both on a regularly scheduled basis and on emergency call. Although available for home care calls on a round-the-clock basis, these physicians have other duties in the medical center. An internist and a surgeon, both Board certified, fill these roles. Their initial duty in each case is to screen the applicant for medical suitability for admission. They visit the patients in their homes, examine them, and prescribe indicated medications and treatments. They maintain complete medical records on all patients. They request consultations from other physicians and services when needed. They establish liaison with any private physicians connected with an individual case. They are also in charge of instruction of the medical students and nurses when they make home calls. (3) Home Care Nurse. A registered nurse employed on a full time basis provides nursing support. She makes periodic and frequent visits to each home and instructs the patient and members of the family in such nursing techniques as administration of medicines and bed baths. Another function is to evaluate all applicants from the standpoint of nursing suitability. She makes available twenty-four hour nursing service, maintains nursing notes on all patients, and keeps an inventory of equipment. (4) Social Worker. A social worker is a full time member of the Home Care Team. Her first function is to determine the suitability of each patient, the family and the home from the socio-economic viewpoint. It is apparent that certain minimum economic standards, including suitable bedroom, adequate heating, light and ventilation and appropriate bathroom facilities, must be present to allow Home Care support. Overcrowded homes and undesirable sociologic environments make Home Care support unsatisfactory. In addition the social worker mobilizes the resources of the voluntary and public health agencies of the community if additional assistance is necessary. She establishes liaison with the patient's family and also serves in determining the extent to which expenditures are justifiable for each individual patient. (5) Medical Secretary. A medical secretary is employed on a full time basis. She is responsible for maintenance of all records, for ordering supplies, and also serves as a liaison point for telephone calls. (6) Porter. A part time chauffeur-porter is employed to drive the Team members and their equipment to the home.

Administration

The Home Care Program has set up the following requirements for admission: (1) A histologic diagnosis of cancer. (2) Categorical incurability in a terminal or pre-terminal stage. Those patients who are experiencing significant disability from cancer are the ones who profit most by home care management. Individuals whose incapacity is only slight are not accepted so that the full resources of the Team may be applied where they will do the most good. (3) The patient must have had a recent complete medical evaluation and must not require hospitalization for an acute process. (4) He must be classified as indigent or medically indigent. These requirements are interpreted to include the patient whose financial resources have been severely taxed as a result of his illness. (5) The patient must be a resident of the Washington, D. C. area. (6) The patient, the family and the family physician, if any, must all desire the services of the program.

Referral System

Prospective cases may be referred to the Home Care Service by a private physician, by a house officer in a hospital, or by any of the public health or community health agencies. When a written request for services is received, a medical evaluation sheet is sent out to the referring doctor. This form when completed outlines the patient's medical background and current status. When this form has been received and all of the basic prerequisites previously mentioned have been met, the patient and his family are then visited and interviewed by the Home Care Team of physician, nurse, and social worker. The patient and the home environment are then evaluated from medical, nursing and social viewpoints. Reports of these evaluations are forwarded to the director and if they indicate that the patient can be helped by Home Care support, he is immediately accepted on the program.

Equipment And Supplies

The Program has a station wagon for transportation of the Team and its equipment to the patient's home. This equipment inventory includes hospital beds, suction apparatus, bed boards, bed pans, urinals, and many other medical and paramedical items necessary for satisfactory patient care.

Operating Procedures

When the patient has been accepted on the program, he has recently completed a thorough medical evaluation, usually in a hospital, and has also been examined by the team physician. Subsequent management of the individual patient will differ with his medical status and requirements On the team visits the physician will examine the patient, evaluate his course, prescribe medications and perform simple diagnostic and therapeutic procedures as necessary. The home care nurse visits the patient with the physician and also independently. She gives medications and treatments requiring special administration techniques, and instructs the family in nursing skills. The social worker also visits frequently to insure that all physical resources are being efficiently utilized.

In addition the patient also has available all the facilities of a large hospital. If need for such specialized services as physical medicine or x-ray therapy is required, the patient may be transported in the team station wagon to the hospital for this treatment on an outpatient basis. Medication and laboratory tests are supplied as needed. Consultation with any of the numerous specialists and subspecialists is available. If unusual need arises, housekeepers are sent into the home for home making services. Upon occasion, when acute need has arisen, practical nurses are supplied for short periods of time to tide the patient or the family over a difficult period. The entire range of medical and paramedical services are supplied to these patients in the home. All of these services are offered to the patient at no charge and all of the expenses entailed in these operations are underwritten by the trust fund which sponsors the Home Care Program.

Any of the patients who have been referred to the program by a private physician may be followed by this physician. The Home Care Team encourages this liaison for both the medical and psychological support of the patient.

Written reports are kept to a minimum and include: (1) Check off lists of requirements for admission. (2) Weekly report from the Home Care Nurse to the Director listing the census, the names of referrals, and a progress report on each patient. (3) Upon demise of each patient a short evaluation is submitted by each member of the Team to the Director summarizing the course of the case and concluding with a candid assessment of the efficiency of our support for this particular patient. These critiques have been valuable in attempting to raise standards of performance.

Statistical Review

A review of the statistical material in this program reveals that in the last ten years a total of 450 patients were referred for the services of the Team. A total of 43,985 patient days of care were provided in the home. During this period 9,604 calls by a doctor were made to the patient in his home. In addition to these visits a total of 727 specialized or consultative services such as physiotherapy or x-ray therapy were also performed either in the home or at this hospital on an outpatient basis. During the same decade nursing visits numbered 7,026 and the social worker visited 2,050 times.

An illustrative example of team activities was found in a patient who was accepted about one year ago suffering from multiple myeloma with extensive bone involvement. She had in addition arteriosclerotic heart disease and was in congestive heart failure. A renal stone with an associated urinary tract infection was present. Mucous colitis was also diagnosed. Resurrent staphylococcal infections of the skin had been present. The patient had required hospitalization for management of these ailments. The Home Care Team after visiting the patient and evaluating her medical and sociologic backgrounds, and after visiting her home, felt that she could be suitably treated in the home environment. Consequently, a hospital bed with bed board and medical supplies were delivered to the home. She was digitalized and maintained on diuretics so that frequent visits to the hospital were not necessary for control of her congestive failure. Antispasmodics and other agents were employed as needed to allay the symptoms of her colitis. Soaks, antibiotic therapy, and incision and drainage were used to clear up the staphylococcal infection of the skin. Members of the family were instructed in the administration of medicines and were also taught simple bedside nursing techniques. Finally, and possibly most importantly, a cheerful well lighted room on the ground floor was selected to which the patient was moved from her previous occupancy of an attic bedroom. In this environment the patient had the constant accompaniment of her three-year-old grandson, a child whom she loved deeply, and in whose company she was extremely happy. During the next nine months this patient's course was gradually downhill, but she was maintained in a nearly pain-free state until the time of her death which occurred peacefully. Without the benefits of the Home Care approach, this patient would have been confined to a hospital, or at least to a nursing home, far removed from the warming environment of her family. Needless to say not all cases fit so happy a pattern, but nevertheless it is believed that almost all patients are benefited to a greater or lesser degree.

Discussion

With a population that is increasing both numerically and in average age, hospital facilities in this country are greatly taxed and even larger demands will be made on them in the future. A rise in absolute cancer incidence and modern systems of therapy which prolong survival have resulted in a sharp rise in the number of people living with cancer. Patients who in the past would have expired of their disease promptly are now being maintained for extended periods. These situations of course present a distinct problem from medical, sociologic and economic viewpoints. It is felt that the Home Care Team management of these patients is one approach to this problem. It is the experience of this group, during the ten years of operation, that a significant contribution can be made both to the patient, the family, and the community.

The underlying philosophy of this program is that the patient will spend his declining days and expire in the home unless a situation requiring acute hospitalization arises. In recent years an attitude, at least in medical centers, has arisen that death in the home is unscientific medically, lower class socially, and vaguely un-American in all respects. This feeling is without justification. A strong argument may be made that the converse situation, that of death in the home, may be desirable from the viewpoint of both patient and family. It must be strongly emphasized that meticulous, thoughtful and enlightened medical care is continually afforded these patients. The Home Care Program is not a "dumping ground" for the incurably ill, wherein a philosophy of hopelessness prevails and a large supply of opiates is the prime medical necessity. On the contrary, a spirit of hopefulness is always maintained and a constant search is maintained for steps which will increase palliation from the disease.

A situation to be avoided is the imposition of a physical or psychological burden upon the family that is too great for them to assume. With any degree of experience and with a careful evaluation of the home situation, this difficulty can be prevented. There are many instances in which the physical environment of the home is so poor that home care cannot be recommended. In addition the patient's family must have a sufficient interest in the patient and sufficient intellectual capacities to carry out the necessary instructions.

With the provisions previously mentioned clearly in mind, an efficient operation of a Home Care Program is easily achievable. It has been the experience of the Georgetown University Medical Center Home Care Service for Cancer Patients during the last ten years that a significant contribution to total community health can be made by this technique. We found that the average cost per day for the Home Care patient in our program was $6.47. When one compares this figure with $39.97, the average per diem cost for a ward or semi-private patient at the Georgetown University Hospital, it is obvious that much can be gained financially by this and other home care programs.

My only object . . . in continuing the discussion has been the desire to ascertain the nature and relations of virtue; for if this were clear; I am very sure that the other controversy which has been carried on at great length by both of us—you affirming and I denying that virtue can be taught—would also become clear. The result of our discussion appears to me to be singular. For if the argument had a human voice, that voice would be heard laughing at us and saying: Protagoras and Socrates, you are strange beings; there are you Socrates who were saying that virtue cannot be taught, contradicting yourself now by your attempt to prove that all things are knowledge, including justice, temperance and courage—which tends to show that virtue can certainly be taught; for if virtue were other than knowledge, as you are seeking to show, then I cannot but suppose that virtue is capable of being taught, is now eager to prove it to be anything but knowledge; and if this is true, it must be quite incapable of being taught. Now I, Protagoras, perceiving this terrible confusion of ideas, have a great desire that they should be cleared up."

—Plato, *The Dialogues*

CANCER OF THE LARYNX

I HAD IT

JOHN FERRIS
New York, New York

EDITOR'S NOTE:

John Ferris, a well-known New York World-Telegram and Sun writer, had had a total laryngectomy and neck dissection because of a carcinoma of the larynx and associated metastatic lymph nodes in the right neck. He has lived cancer. His ability to record his experiences and reactions, as a cancer patient has helped his physicians in treating other patients. It is with this thought in mind that his article is presented here.

Two characters in two separate Broadway plays died from cancer in the 1960-61 season. Both characters, an English monsignor resident in Italy and a cynical ex-president of the United States, grimaced suitably at the proper time, hastily swallowed pills to deaden their pain, and in other ways behaved with a restraint and nobility calculated to excite in the onlooker a moderate but not too disturbing sympathy.

The ex-president, a man of easy profanity, died offstage; the monsignor, endowed with a dignity and sanctity denied the rude politician, played a more demanding role and was allowed to expire, not unpleasantly, onstage.

Cancer is not likely ever to attain in the drama the rank accorded the dagger in Italian opera. It lacks the dagger's showiness and its immediate lethal power. Nonetheless it is a reliable device and the actor who has cancer in a play is set apart from the others in the cast. There never is a doubt in the theatergoer's mind how the dramatist will resolve that problem.

Why go to the trouble of introducing cancer in the work if it is not to jolt the customers in a way that a kidney, heart or liver ailment never could. Cancer in the theater is invariably equated with death, and if death doesn't take place before the final curtain then surely it must occur before the last commuter in the audience reaches home.

The monsignor and the ex-president were alike in one respect: both were well-adjusted, cheerful, and showed neither irritability nor fear. Their companions were cheerful and never noticeably worried over what lay ahead. At times, cancer seemed no worse than a passing bellyache. Still, the oppressive note had been sounded, giving the proceedings a faintly doleful if somewhat false air even when one accepted both men as persons of courage and exceptional reasonableness.

The truth is usually harsher and far more interesting because there is nothing like cancer and no patient like a cancer patient and, by extension, no relatives of patients like the relatives of cancer patients. From this it follows that there is no doctor-patient relationship like that which exists between the physician and the cancer patient.

A piquant irony may be found in this, for while cancer presents the doctor with a challenge it also imposes on him a peculiar burden—or burdens, to be exact. They may, and in fact usually do, vary in size and shape and complexity and may be borne briefly or for a period as long as the doctor's own life.

First off, there is the psychological impact of cancer. It jars some patients as nothing else affecting their personal safety ever could. It fills some with despair and strange remorse and suicidal promptings. It destroys, for a time at least, the trivial, and it distorts values. It may shatter a patient's sense of time, leaving the days without meaning or cruelly magnifying every minute.

The impact of cancer upsets relatives and friends and is felt in diminishing form wherever news of it is carried. The word itself often creates a feeling of terror. In moments of frightening clarity—of sudden intense awareness of man's pathetic vulnerability, his pitiful mortality—the thought of cancer may unite many disparate minds in a common fear. The presence of cancer in the body clouds the mind with questions, layer on layer, sometimes of a density that blurs the light of judgment and reason. Every question entails a problem and every problem is related and interrelated with every fact of a man's existence.

At the same time, the future into which man is accustomed to project himself — the tomorrow of work and pleasure, of dreams and plans and hopes — seems suddenly shut off. Paradoxically, the fear of death, commonly associated with cancer, may be pressed into some dim, shapeless and quite harmless form.

Life, not death, dominates all thought—or, more precisely, living and the problems of living. These problems become the doctor's problems, his burden, and the quicker he accepts them and analyzes them and understands them, the better it is for the patient and the patient's relatives and the doctor himself.

It may be an accident of personality that some doctors, by their judicious use of words and tone of voice, instill confidence in patients whereas others of equal or superior technical knowledge and skill sometimes fail. Medical schools do not and cannot teach everything and even when they try they don't always succeed. They can hardly hope to give a doctor wisdom any more than a seminary or a monastery can teach a man piety. The wisdom comes through observation and experience and the doctor's earnest appraisal of his own attitudes.

The doctor who merely patches a broken head or sets a leg or sees a man through pneumonia may be sympathetic and still detached. Practice and a clever professional manner will provide a mask. The mask even may be accepted as a convention by patients who have nothing seriously wrong with their health. The doctor who faces the cancer patient needs wisdom as well as knowledge and if he lacks it, he should learn it. Every doctor gives something of himself to a patient or, at any rate, likes to think he does; and usually he does communicate something—hope, assurance that things will be all right, etc. Every doctor also has patients who depend on him as a soothing emotional force. The cancer specialist comes to know more deeply the loneliness of body and spirit that often seize a patient. The patient may reveal a possessiveness that seems unreasonable and irksome.

The wise doctor never stops applying his mind and heart to each new case. He takes nothing for granted. He quickly becomes aware of the importance of establishing a happy doctor-patient relationship as early as possible. He may be brisk but never abrupt. He becomes a master questioner, adroit, and intrusive in a kindly way, as he assembles material which would have little relevance in non-cancer cases. His powers of judgment grow. He learns when and where to anticipate trouble and how to deal with it, and the time and the circumstances for breaking a piece of bad news.

A cancer patient may be calm and reasonable and submissive and cooperative. Or he may be difficult and unpredictable; and he may have relatives who are not only unpredictable but irrational, hostile, skeptical, abusive. (An educated woman whose child was brought to a New York hospital with leukemia compared her reaction to the diagnosis and prognosis with that of the ancient Greek who slew the bearers of bad news.)

One of the most important elements, therefore, in a happy doctor-patient relationship is the doctor's knowledge and understanding of the patient's background; his economic circumstances, education, tastes and prejudices, and all sorts of things about his family even to the gossiping capacity of his wife's sister-in-law's first cousin who may be a busybody. The amount of misinformation about cancer and the mischief done by idle talk can scarcely be estimated.

The doctor himself must learn tact if he doesn't have that virtue at the start. A New York surgeon learned in a tragic way the value of the advice to those who practice the art of healing: "Do as little harm with words as possible." He was faced with the duty of telling a woman, eight months pregnant, that she had cancer of the breast and that only an operation would save her life. He decided to tell the woman's husband and allow him to break the news.

The husband reacted violently. The doctor who was young, strong, self-righteous and lacking in experience reacted just as violently himself to the husband's abuse. He delivered a bone-cracking lecture to the man on the urgency of his wife's condition. "Do you want her to die or do you want her to live?" he demanded. "Do you want to be a widower with small children to take care of? Do you think you know better, etc.?"

The man heard him out in brooding uneasy silence, nodded glumly and left without a word. He went directly home and killed himself with a revolver. The woman had her operation and survived. The baby lived. As for the surgeon, he learned too late what he should have known; a part of the husband's background had been withheld from him. The man had not long before been released from a mental institution.

The lesson was painful but beneficial and a good example of what may happen but cannot always be anticipated. Still, today's doctor has one clear advantage over those who practiced when cancer was regarded with such horror and revulsion that it was never named as a cause of death in newspaper obituaries. (Editors usually settled for "an internal ailment" or said nothing.) The horror and revulsion have by no means disappeared, but cancer no longer is socially unacceptable. Moreover, the old widespread belief that nothing could be done about it, that all cancer patients were doomed, has been weakened by public education. Considerable ignorance still abounds but nothing comparable to the blankness of mind that once was common.

The patient who comes to a doctor for examination now may be frightened but he also has hope. The unending publicity about cancer—the importance of cancer detection and early treatment—has helped the doctor. People are cancer-conscious, often morbidly so. Patients are often prepared to hear the worst, though the patient who does get bad news is likely to smile grimly and patronizingly at himself for having thought the terrible truth could be received without a shock.

A curious note may be inserted here: although no more than one-fifteenth of the lumps in women's breasts turn out to be cancer, most women and their families think of the lump as a cancer even before a diagnosis. It would be false, though, to assume that their suspicions make it easier for the doctors to announce the news if it is bad news or for the patient and her relatives to accept it.

This raises the question of whether the patient should be told the truth or have it withheld; or whether it is better to explain the case to a relative—husband or wife, brother or sister or parent, or grown son or daughter. The doctor who has had little contact with cancer patients will certainly need courage—he may even need it when he tells a patient that a biopsy is necessary.

He may try to delay announcing bad news; he may try to be evasive even though his eyes and his manner betray him. A patient may be satisfied with the doctor's shrug or an answer that says nothing. Some patients make it plain they prefer not to know. But most do, and a determined patient will resort to cunning or a blunt demand for the truth —or a relative will do it.

A doctor may be deceived into believing the news will not be hard to take or he may be forced into a position where he must tell the truth or lie. The patient (or relative) appears hardy enough to bear the blow, and at this point the doctor may learn a little more wisdom from the patient's reaction: hysterics perhaps or complete collapse. The first step on the road to wisdom, of course, is the doctor's ordering of his mind to be more cancer-conscious.

The financial question in cancer cases has aspects which require more than casual examination. The treatment of cancer may be brief, assuming death intervenes, and still expensive. It may be protracted and even more costly. Cancer may drain a patient's financial resources and those of his relatives as well and destroy his income. It may deny him a privilege he has always known, to say, in effect, to spare no expense as he will pay later. He may live and be unable to pay for everything; he may die and leave unpaid bills.

At first he may be grateful to the doctor for his help and then loathe the responsibility of paying him even as he clings to his image of the doctor as the good man whom he needs.

Experienced doctors say an understanding of financial arrangements ought to be reached as quickly as it is feasible. Luckily, most patients today belong to some hospitalization-medical-surgical insurance group, and this eliminates much of the old awkwardness of money talks. In these matters, also, the doctor may have to consult with one or more of the patient's relatives.

Some doctors profess to be indifferent about money. Others are more careful. Nobody, naturally, enjoys paying for medical care. For travel, theater, dining, pleasure in general, yes. For the body's ailments, no. Still, the patient does pay and usually with gratitude unless he thinks the bill too high, and doctors have been known to confess that a bill was too high.

It isn't always the doctor's bill that shocks but the costs that pile up in hospitals: the X-rays, chemical analyses, all the various tests and drugs and nursing, etc. In view of all this, it is certainly better for both doctor and patient to make note of their own arrangements in writing. The patient and his relatives may, after all, have a better memory than the doctor's—or an inferior one. Group insurance payments don't cover everything and even when the payments are large there is apt to be dissatisfaction, and there is no reason to expect the doctor, however kind and considerate, to be spared some sort of involvement.

All this is disagreeable enough, but then cancer has many disagreeable sides, one of which is that so many cancer patients must depend on others. The patient who is exposed to the care and thoughtfulness of doctors and nurses in a good hospital may easily be deceived into thinking the outside world has as much charity and love to offer. It has a great deal, to be sure, but not even relatives who care in a deep personal way are angels.

In his quest of that rare wisdom he ought to have, the doctor becomes aware of the new delicate relationship the patient has with the world. Even such a simple thing as the patient's comparison of life in the hospital and life at home often becomes important. A nurse's solicitude for example may be accepted as routine; a relative's solicitude at home may raise the suspicion that things are pretty bad, else why the unusual interest.

The home has a great deal, but its ways are not those of the hospital and no one expects them to be, now or ever. There is much to be said in praise of the professional manner, the calm, objective air. This may sound patronizing but it isn't meant to be so. My own treatment, at the hospital where I underwent a laryngectomy and later on the outside, seemed to me exemplary. I was neither bullied nor pampered. I found the institutional discipline tolerable, and in the apartment where I stayed with friends for a few weeks after my discharge I knew only kindness and simple good sense.

The good fortune that was mine heightened my understanding. By the simple process of cataloguing the good things I was able to imagine the less good, the bad and even the worst things that can befall a cancer patient. Nobody tried to comfort me with statistics about recovery; nobody offered me the kind of solicitude which tends to raise suspicions in the mind of the unwell. Nobody pressed on me unwanted advice or retailed upsetting gossip.

As time passed I became more and more aware of the good and, by its absence, of the bad. My views of the bad were easily confirmed later in talks with doctors. I heard of patients who accepted, and indeed expected, very close attention in the hospital where the atmosphere seemed to warrant a solicitous manner, but who resented it at home if only because the amateur product and the familiar surroundings made them uneasy. I heard of others who concluded that some of the domestic tenderness was a sort of penance for past injuries or, worse still, the result of sincere and profound fears for the future.

The doctor must try to foresee and forestall the damage such reactions cause. A nagging relative, a talkative neighbor, a plain gossip may be difficult to counter. The kindliest relative or friend may inflict pain and anxiety without meaning to do so. Some patients have enough will power and intelligence to combat bad influences. Some have the strength and courage even to raise the depressed spirits of those close to them who worry and are unable to hide the evidence.

Still, the number of cases of patients who left the hospital in good spirits and were soon plunged into dejection or worse at home or outside the home is considerable. One reason is the emotional effects of cancer in the non-sufferer as well as in the patient. Defeatism seems to be a concomitant of the disease.

Doctors may state with conviction that a cerebral vascular accident of an advanced case of tuberculosis is worse than cancer, but this kind of truth is not especially comforting in any genuine sense. The cardiac patient may be discommoded by an enforced routine of rest, moderate exercise, diet and so on and still be free of anxiety, certainly anything like the anxiety the cancer patient knows. The cancer patient depends on others and never forgets it; a dozen of his friends may pop off from heart disease, but he has cancer and it is on his mind.

When my own doctor heard that I was going to write this piece, he remarked that I was bound to hit some controversial point no matter what I said. I thought, "Good!" and told him what an eminent New York lawyer had said to me after I had written something in a newspaper story which offended hypersensitive Irish-Americans. The only way not to offend them, he said, is to write nothing.

Controversy is better than stodginess.

Nothing will sustain you more potently than the power to recognize in your humdrum routine, as perhaps it may be thought, the true poetry of life—the poetry of the commonplace, of the ordinary man of the plain toil-worn woman with their love and their joys, their sorrows and their griefs.

—William Osler, *Aphorism of William Osler*

THE CANCER PROBLEM — AS SEEN FROM THE CANCER HOSPITAL

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EDITOR'S NOTE:

Care of the cancer patient is costly as both the doctor and the patient are aware. Some of the reasons for this can best be seen through the eyes of a person responsible for the direction of a hospital admitting large numbers of such patients. Hence we have asked Mr. Richard D. Vanderwarker, Vice-President and General Manager of Memorial Hospital for Cancer and Allied Diseases in New York City to discuss the financial aspects of the disease in light of modern therapy and in comparison with available cost data from hospitals which treat a wide variety of diseases.

Cancer is an expensive disease. Nowhere is this fact more apparent than in an institution devoted to the care and treatment of cancer patients.

Aside from the heavy cost in lives which is all too apparent to everyone concerned with the disease, the economics of treating cancer—of providing the best in modern therapy, including clinical research trials — presents problems that need sympathetic understanding of everyone involved, the patient, his family, the doctor and the nursing staff.

Primarily the reason for heavy costs is due to the nature of malignant disease itself. It appears that the cost of caring for a cancer patient has marched steadily ahead somewhat proportional to the number of lives saved. But to secure a higher yield of cures, better utilization of treatment methods has been accomplished by a vast number of ancillary procedures that give the surgeon and the radiologist a much better chance of applying his skills successfully. The profusion of physiological tests that take stock of a patient pre- and post-operatively are directly related to the rising cure rate.

The cancer hospital might be called the frontline of both defense and attack on the cancer problem. It is generally agreed that modern facilities have been responsible in a large measure for the better yield in saving lives from cancer today. The rising cure rate, which nationally has increased from about 25 to 33 per cent over the past decade would not have occurred had the facilities for dealing with difficult cases not been developed.

It must be realized too that the rising cure rate of malignant diseases has been brought about mainly through refinement of traditional techniques of treatment, i.e.: surgery and radiation, without to date any revolutionary breakthrough in the therapeutic methods.

All the supportive treatment and biological measurements now available have reduced guesswork to a minimum. Cancer treatment today, compared with surgery and radiation of two decades ago, is much like comparing a jet plane with all its electronic controls to the old bi-plane that a barnstorming pilot flew by the "seat of his pants."

A cancer hospital such as Memorial must also provide an opportunity for making available to the patient the most promising products of research. Adjuvant therapy, such as the use of chemicals in improving results of traditional treatment, and chemotherapy to extend lives and slow the course of incurable types of cancer such as the leukemias, requires a high degree of professional skill and experience for either palliation or cure. To administer these kinds of treatment calls for continuous and precise observations obtainable through serum analyses and other specialized procedures. These are necessary to assure maximum safety and benefit.

What all this means in terms of workload in a cancer hospital can best be shown by comparing Memorial with other hospitals in this area, recognizing that others are general hospitals treating a variety of ailments, most of which are curable and whose patients by and large spend a much shorter period of hospitalization. One index of differences in workload can be shown through cost analysis.

Hence, we have estimated that the cost of patients care in Memorial Hospital is approximately 50 per cent more than in the general hospital in this same area. A comparison of expenses per patient day at Memorial and the average for 53 general hospitals in New York* shows $49.33 for Memorial and $33.78 for the general hospitals.

To further understand some of the reasons for this difference, it must be recognized that the neoplastic disease, both malignant and benign, frequently call for heroic measures. Although cancer in all its forms is now being cured in about one-third of all cases, this includes a large proportion of those diagnosed early. The most difficult cures are those of moderately or advanced cases and it is among these categories that most of Memorial's patients fall. Because such a large number of its patients are in these groups, care and treatment become that much more difficult.

As surgery remains most frequently the treatment of choice, about 75 per cent of all admissions to Memorial are surgical cases. It is not surprising that the expense of operating room services per average patient day at this hospital is $6.92 compared with $1.62 for the 50 general hospitals in this area.

In general other professional costs are higher. Laboratory costs per patient day at Memorial average $3.20 compared with $1.64 in the general hospitals. X-ray costs for this hospital per patient day run to about $2,77. It amounts to $1.33 average in the non-specialty hospitals. Pharmacy costs are higher: $2.11 per day compared with $1.37.

Altogether, professional services cost more than double in the cancer hospital. At Memorial these services amount to $23.17 per patient day. The general hospital average for comparative services is $10.80.

The other factor which pushes up the cancer hospital cost is nursing. In a disease such as cancer, patients require a higher degree of nursing care both qualitatively and quantitatively. In the average general hospital a patient receives the care of a registered or practical nurse or nurse's aide for about four hours each day.† At Memorial the nursing hours per patient day average 8.5. For the registered nurse alone the avereage is 4.6 hours per day. The more intensive nursing care and the specialized skills needed, especially among supervisory personnel, increase the cost of these services. Nursing costs per patient at Memorial average $14.09 per patient day compared with $7.93 for general hospitals in the same area.

In general services, however, Memorial Hospital does not compare unfavorably with the general hospital. This category was some 15 per cent less than in the group of general hospitals. The statistics were: average cost to the patient in 53 general hospitals, $15.05; for Memorial, $12.67. Most of this difference was in administration and general costs and in plant maintenance, although other items, such as nutrition, housekeeping and laundry were consistently and slightly lower.

There is little doubt then that the successful treatment of cancer demands vastly more of any institution. The concern over higher costs naturally must be reckoned with but in terms of saving lives, it is difficult to equate dollars with techniques which can be successful in preserving a human life.

The rising cure rate in most sites of cancer is the best argument available to refute claims that our economy cannot afford this increase. Aside from experimental methods of treatment such as chemotherapy, supportive tests and treatment in connection with surgery today call for vastly more extensive and hence expensive medical services. As an example we have selected two patients, one in 1949 and the other in 1960, both undergoing radical mastectomies, to illustrate this point.

Our 1949 patient, whom we shall call Mrs. Smith, spent a total of six days in the hospital and her pre-operative workup consisted of a chest film, Hemoglobin count and urinalysis. During surgery she received normal saline glucose and one pint of blood. Had she received these same services and spent the same time in this hospital today, her charges would have been $248.

Our second patient, whom we shall call Mrs. Jones, was admitted to Memorial in October 1960. Our records show she received the following preoperative workup: a chest film, a skeletal survey and a repeat chest film on the day prior to surgery. Before and after her surgery she received these tests: three hemoglobin counts, three hematocrits, a white blood count, three urinalyses; urea nitrogen test, Papanicolaou smear test, an electrocardiogram and received some Digitalis. During her operation she was administered two pints of blood and glucose solution, a separate relaxent, pentothal ether and oxygen. Following surgery, a naso-pharyngeal procedure was employed, she received Numbutal, ETCH with Codeine, Feosol sulfate, had the use of ace bandages, gumco suction and other miscellaneous items. All of this came to a total of $359. Added to this is the cost of 15 days room and board at $30 a day for a total of $709.00.

Compare her bill with that of Mrs. Smith. It is nearly triple. In addition to the fact that her stay was more than twice as long, the treatment in connection with her surgery was vastly more complex, involving three or four times as many procedures.

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* Source: United Hospitals Fund Reports, March 1959.

† National League for Nursing, Abdellah Survey of 57 Hospitals.

It is fairly clear then that treatment comparable in its goal to that of 15 years ago is many times more complex. That this is necessary cannot be denied because the yield in lives saved is certainly apparent. As knowledge about malignant growth increases, so does the number and complexity of biological procedures and supportive measures.

Obviously much of the new approach in treatment is the result of research which is going forward at a fantastic rate. Every new discovery, after long preliminary testing must eventually reach the beside of the patient. Clinical trials then prove the validity of new discoveries and become part of established procedure.

At the rate fundamental and clinical research is proceeding it seems inescapable that the treatment of cancer will become even more complex and fortunately, more rewarding to the patient as time goes on.

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EDITORIALS

Multiple Sclerosis—A Comment

The etiology of disseminated sclerosis remains unknown. Present-day theories of causation are old—some as old as the original descriptions of the disease in the 19th century. It may well be that this disorder, characterized by lesions widely scattered throughout the central nervous system and a totally unpredictable course, is not a disease in the true sense of the term, but rather a pathologic and symptomatic reactive complex: a mechanism of response on the part of the nervous system to multiple endogenous and/or exogenous abnormalities. Until quite recently there were few changes detectable on examination of the blood, cerebrospinal fluid and urine. Today, with more highly sophisticated methods of investigation and a somewhat greater interest, deficits of a biochemical nature, and even abnormalities in blood cell morphology, have been noted[1].

In recent months the accidental discovery that tolbutamide has seemed to be responsible for the amelioration of some symptoms in some patients[2] has focused attention on a disorder of carbohydrate metabolism. This, too, is not new. Administration of certain compounds active in carbohydrate metabolic cycles (muscle adenylic acid[3,4] cocarboxylase[5]) has also been found useful in some patients. It seems, in these cases, that encouraging responses have been observed only in those patients who exhibit some detectable disruption of carbohydrate metabolism. Unfortunately a specific, localizable biochemical lesions is not known. It is possible, also, that the abnormalities noted reflect effect rather than cause. To complicate still further an already confused situation, for each proponent or supporter of an etiological concept of carbohydrate defect there is a formidable opponent. Whereas dietary carbohydrates may be restricted here[2], fat restriction has also gained some adherents, while still others utilize certain fatty acid supplement therapeutically. Starvation could happily be prevented by a diet rich in proteins, were it not for the fact of their indictment by followers of a neuroallergic hypothesis.

The latter concept is most provocative[6,7,8,9]. Evidence from both clinical and experimental sources lends strong support to an immunologic etiology of disseminated sclerosis. The coexistence of multiple sclerosis and other allergic diseases and the initiation or aggravation of symptoms following the administration of sera and vaccines (tetanus toxoid, antidiphtheritic serum, typhoid vaccine, etc.) [6] are compatible with such an etiology. Clinical and pathological laboratory investigations are also highly suggestive of an allergic phenomenon. For example, the adherence index of blood platelets is abnormally high during symptomatic activity and in 85 per cent of patients gamma globulin is increased in the cerebrospinal fluid[7]; the presence of perivascular inflammatory infiltration seen at a distance from the plaques, small thrombi located around foci and in "healthy" tissue, granulomata, and many slight hemorrhages, all occurring concurrently[7], supports hypersensitization. Experimental allergic encephalomyelitis, which may closely resemble pathologically the lesions of multiple sclerosis, can be induced in lower animals by the parenteral administration of brain tissue combined with tubercle bacilli[8].

Although the search for a microorganism continues, it is unlikely that multiple sclerosis is caused by a specific virus or spirochete, as it once was thought[9]. Recent work would tend to implicate an infectious agent rather as part of a larger immune mechanism in the causation of this illness. It has been proposed that the initial manifestation is of infectious (possibly viral) origin and that subsequent symptoms are allergic in nature, in which the nervous tissue originally damaged becomes an antigen.[7] Infectious agents or their toxic products may combine with brain tissue or its fractions (proteins, lipoproteins, etc.) or with protein foods to form an antigenic compound[8]. Certain viral diseases of lower animals (canine encephalomyelitis; visna, a disease of sheep), ordinarily producing a meningitis or meningoencephalitis without specific damage to myelin sheaths, are, in some cases, manifested by a demyelinizing encephalomyelitis; in these cases, the virus may have combined with disintegrating nervous tissue to form an antigenic substance responsible for the pathologic lesions[8].

Attempts at alteration of the course of this disorder by means of therapeutic measures oriented along the lines of metabolic, allergic and "infectious-allergic" pathogeneses have met, at best, with limited success. Difficulties in evaluation of therapy in multiple sclerosis, relating primarily to unpredictable nature of its progress, are well-known. Elucidation of the mechanism of demyelinization, stemming from studies in the relatively new fields of neurochemistry and electron microscopy, will undoubtedly lend impetus towards the eventual disclosure of the ultimate therapy.

ARTHUR BERMAN, M.D.

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"Prophylactic" Castration

Therapy of female breast cancer is far from adequate at this time. Almost 75 per cent of women with breast cancer will ultimately die of its effects. Primary surgical therapy has changed little in over 60 years and the only progress in the most recent decade has been with new hormonal and chemotherapeutic agents aimed at eliminating foci of malignancy. That alteration of the hormonal milieu of metastatic disease is effective is emphasized by the 25 per cent of patients who demonstrate objective remission of their disease after castration or additive hormonal therapy.

The role of castration is well established as reasonable therapy for the already known metastatic deposits. But what about "prophylatic" castration? Elsewhere in this issue of *Connecticut Medicine* is a provocative report by Doctors Allan Ryan, John Curry, Henry Eisenberg and Joan Campbell on this topic. Unfortunately, as in other similar studies, retrospective analysis is necessary when dealing with this topic. There has not been as yet a prospective study to evaluate this challenging possibility—castrate and prevent metastases. Dr. Ryan's study hints, as other studies have done, that castration before metastases appear may be beneficial to the patient but none of the conclusions are statistically unequivocal.

The National Cancer Institute has been interested in this problem for some time, as have other independent investigators. Each comes to the same conclusion — a prospective, statistically randomized study must be done if the answer is ever to be determined. The Cooperative Breast Cancer Group of the Cancer Chemotherapy National Service Center has been considering such a program and it is hoped that when details are completed that many institutions will cooperate to find the answer.

Connecticut physicians have already demonstrated their willingness to help in clinical evaluation programs. The success of the project at Yale in evaluating hormonal agents in breast cancer has largely been the result of such cooperation. It is hoped that when a program to evaluate prophylactic castration is established that Connecticut physicians will continue their interest and aid.

I. S. G.

Pyrogenic Steroids

What happens to adrenocortical and gonadal steroid hormones during their metabolism in vivo? Do they exercise their effects and become inactivated? Are the numerous metabolites which derive from the hormonal degradation products, waste products, devoid of significant physiologic activity? The answer to these questions is No, since it has recently been shown that when adrenocortical and gonadal steroid hormones are metabolized in vivo there arise new derivatives which possess unusual biological and clinical properties. Thus certain steroid metabolites have powerful hypnotic and anesthetic properties[1]. Also now known are steroid hormone derivatives possessing antibiotic and tumor inhibitory effects[2,3]. Progesterone metabolites have been shown to have important metabolic activities[4]. Androsterone exercises a potent hypocholesterolemic effect. A number participate as co-enzyme[5] in hydrogen transport mechanisms[6]. In fact, some of the hormonal metabolites may even be antagonistic to the action of the precursor hormone a fact which could influence the ultimate expression of the hormone influence in man[7].

It is clear enough that the numerous metabolites which derive from hormonal degradation are not just "waste products" devoid of physiologic significance but instead may act as important physiological and clinical substances in their own right once they are formed. One such derivative is etiocholanolone which has been known to produce a fever since 1956. Since then it has developed that this steroid is but one of a whole class of thermogenic compounds of steroid origin. The effects are well described, but the mechanism of fever production still remains unclear. The manner of the pyrogenic response to products of bacterial and viral origin has been clarified by injecting their products in animals[8]. This method however is not so successful in elucidating the nature of the pyrogenic response of thermogenic steroids because of species specificity and only by studying man has it been possible to recognize a number of differences between the biological properties of bacterial and steroid pyrogens.

When steroid pyrogens are injected into man, there is a prolonged latent period, not observed after injection of bacterial endotoxin. There appears to be no transferrable pyrogenic substance in the plasma of patients with steroid fever, whereas in the fever caused by bacterial endotoxin, there is an endogenous pyrogen which is released in the blood stream of animals[8]. Can it be that the fever provoked by steroids has a different mechanism than the one caused by a bacterial endotoxin, or is there a more basic mechanism common to both?

The new class of thermogenic agents of steroid origin is of especial significance from the clinical standpoint. Bondy et al[9] found etiocholanolone in the blood of patients with periodic fever during the febrile phase but not during the afebrile course of the disease. On the other hand, the plasma of patients suffering from microbial fever did not contain a thermogenic steriod. Since the liver esterifies and renders inactive some thermogenic steroids it is understandable why some patients with diseased livers would not be able to inactivate the pyrogenic steroid and therefore show a fever. But it is also true that the liver itself can produce a biliary steroid lithocolic acid which has marked fever producing activity in man[10]. May this not be the clue to the frequency of fever in liver disease?

This raises the question whether there may not be many forms of periodic fever, recurrent or prolonged fever, now thought to be of obscure or unknown origin that may turn out to be due to a steroid derived pyrogen? Clearly we are at the threshold of a new approach and a new concept regarding the causes and the mechanism of fever. In a more fundamental sense, new areas are now ready for exploitation in the whole field of the physiologic action of hormonal degradation products.

L. H. N.

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Francis Bacon

The twenty-fifth anniversary year of this Journal, devoted to communication of scientific ideas, is also the four hundredth anniversary of the birth of a man of transcendent importance in the history of science—Francis Bacon. He was the philosophic innovator of induction, the proponent of the experimental method, and the prophet of technology, the application of science to industry.

The idea that science ought to transform the fundamental and material conditions of life, that knowledge should be practically applied in works, inventions, and industry is the core of Bacon's contributions. Before such transformations could take place, however, a revision in scientific thinking was necessary. In his view Aristotelean deductive logic was important but not sufficient for real progress, since premises to deduce from could not be arrived at with scientific certainty. Instead, premises were to be built up, or induced, from observations, statistical evidence, and probabilities. "The discovery of particulars" upon which scientific premises and laws could be based depended not only upon nature at rest, but even more strongly upon nature "vexed" by the scientist. Observation and description of states, objects, and events would not suffice, and only through the alterations of nature accomplished by the techniques of the experimenter could comprehensive data be obtained. Thus Bacon introduced into scientific thinking the "upward ladder" of induction, the proceeding from the particular to the general, the formulation of scientific laws and concepts as unifying statements, with predictive value, from numbers of similar or related observations. The data for such generalizations was to be obtained through experimental as well as observational techniques.

Bacon was the first thinker after Agricola to understand the social significance of science. He was the prophet of what science in its application could do for mankind. For him the aim of scientific activity was not the mere acquisition of knowledge, but its application to improve the human condition. "Science, like religion, must be judged by its fruits", he wrote. Scientific effort must then be both communicated and organized, and he envisioned a great system of academies and societies, functioning with state and mercantile support and devoted to organized research and technology. The first formalization of any of these ideas was the establishment of the Royal Society by Charles II one hundred years later.

Bacon has often been charged with neglect of genius, since the application of his scientific method depends on careful observation and analysis rather than brilliant flashes of intuition. It is clear that his main concern was the propagation of the experimental method as a safer and surer, if less spectacular, means of achieving scientific goals than reliance upon the sporadic emergence of geniuses. His faith in the capacity of the human mind to comprehend and control nature was enormous, and he felt that a large community of ordinary men engaged in organized scientific activity on many levels would insure the continuity necessary for the implementation of his great design.

In improving man's living conditions through science, Bacon hoped that man himself would improve and come to transcend his predatory instincts. He considered nature inferior to the human spirit, "by reason whereof there is agreeable to the spirit of man a more ample greatness, a more exact goodness, and a more absolute variety than can be found in the nature of things". In this era of the possibility of the thermonuclear termination of human existence, as Karl Jaspers puts it, there is little evidence that this hope of Bacon's has come closer to realization than in his own time. He recognized that the sciences have "an ambiguous or double use, and serve as well to promote as to prevent mischief and destruction, so that their virtue almost destroys or unwinds itself". If man can choose the proper of the alternative applications of science, Bacon's prophecies may yet be fulfilled.

H. L.

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Digitalis Toxicity

Digitalis has been with us for almost 200 years, nevertheless underdigitalization and overdigitalization still bedevil us. Withering stated clearly how to avoid underdigitalization i.e. to give the drug in sufficient amounts until a therapeutic effect is achieved. Although the procedure is generally followed today in the digitalization process, it is during the maintenance period also that problems arise and in recent years, overdigitalization has become more of a problem. One reason is that we have available potent purified preparations with which a digitalis effect can be quickly achieved, and if one looks for evidences of satisfactory physiologic response the therapeutic dose may be exceeded. However, there are other reasons which are particularly important at the present time. One is that with the prevalent use of salt free diets and powerful diuretics, many heart patients are spared for years until finally serious cardiac degeneration makes such patients more susceptible to toxic effects of the drug. Another reason is that since digitalis activity is intimately related to potassium content of the myocardial cell, a loss of potassium through powerful diuresis can precipitate toxic responses of digitalis. Beside this, there is still unsettled what the optimum serum level of potassium really is, especially during digitalization. In many clinics 3.7 m.Eq is considered low normal while in others 4.2 is thought to be indicative of normal potassium concentration. If it is the latter then large numbers of patients with heart failure receiving potassium wasting diuretics are operating on marginal potassium blood levels and are fitting subjects for the development of digitalis toxicity.

Another reason for over or underdigitalization is the tendency on the part of the physician to maintain patients on a digitalis dosage without more frequent review of the state of the patients digitalization. Patients occasionally skip doses or may take an extra few if they don't feel "just right." But another reason is the variation in the digitoxin content of the various brands of pills at present being dispensed. As the *Medical Letter* of June 9 points out many seizures of substandard lots of digitoxin have been reported in the "Notices of Judgment of the Federal Food and Drug Administration and furthermore, laboratory tests of digitoxin purchased from thirty-five drug companies show that samples obtained from nearly a quarter of the companies failed to meet the requirements of the U.S. Pharmacopia. Some pills were 80 per cent standard while others were as high as 117 per cent. Although 27 of the 35 samples did conform fully to the standards nevertheless in view of the uncertainties and the special risks of this drug, the physician would do well to prescribe the product of a particular company known to have good control procedures.

When all this is said, it is still necessary to be on the alert for digitalis toxicity. Soffer[1] has recently called attention to this problem which may be serious in the aged and debilitated patient especially one who has been vigorously treated with diuretics which are also potassium wasters. Since digitalis produces disturbances in the permeability of cardiac muscle especially to the potassium ion, a loss of potassium can increase toxic actions of digitalis and cause sharp St and T changes in the electrocardiogram as well as arrhythmias some of which can even be life threatening such as ventricular tachycardia and conduction disturbances. These arrhythmias may be attributed to digitalis if they appear as the digitalis dosage is increased and disappear with decrease or cessation of administration. Soffer especially urges us to be alert for nodal rhythm with a ventricular rate over 70, especially if the atria are fibrillating. This is an important clue to digitalis poisoning and prompt stopping of the drug may be life saving.

It is interesting that in 20 of his 24 patients toxicity was induced by digoxin and 19 were on Chlorothiazide or mercurial diuretics when the evidences of poisoning appeared. The parenteral administration of 1.5 mg. of digoxin is evidently excessive in the aged patient especially in one in which potassium stores are depleted.

This brings into clear view the question whether rapidly acting glycosides like cedilanid or digoxin, which admittedly are useful for quick action, should also be used for maintenance. The rapid excretion of these drugs frequently makes difficult the maintenance of a physiologic digitalis affect by daily or twice daily doses. Often such patients tend to oscillate between underdigitalization or overdigitalization.

Soffer suggests that patients with heart failure especially the aged ones who receive fully digitalizing doses, should be carefully followed by electrocardiograms as well as by careful electrolyte studies and physical examinations. It is the electrocardiogram which reveals rhythmic disturbances and conduction changes, the first evidences of dangerous digitalis complications.

Since digitalis toxicity is related to low serum potassium it is only rational to attempt to treat symptoms of digitalis poisoning not only by withholding the digitalis, but also by administering potassium. A heart with advanced failure may have diminished potassium stores and further loss of myocardial potassium induced by digitalis overdosage will only serve to aggravate and perpetuate the periods of refractory failure. For this reason therapy with potassium is of value, but it must be remembered that there is a danger of inducing hyperkalemia especially if the kidneys are unable to eliminate potassuim excess. I.V. potassium especially is potentially dangerous in the presence of heart block and if given rapidly may precipitate ventricular tachycardia.

It is clear enough that digitalis toxicity can become a medical emergency, and we must be more alert now that patients with heart failure are relieved and able to reach an older age when more degeneration and greater likelihood of electrolyte inbalance renders them more susceptible to digitalis toxicity.

L. H. N.

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The Fish That Discovered Water

Some scientists at Smolensk University decided to develop a fish that could live out of water.

So, choosing some healthy red herring, they bred, cross-bred, hormoned and chromosomed until at length they had a fish that could live—at least exist —out of water.

The local commissar was not satisfied. True, these fish had survived till now on rarefied gas, but how about reactionary tendencies? He suspected a secret yen for water.

"You have neglected education," he said. "Start over, and this time do not neglect education."

So again they bred, crossbred, hormoned and chromosomed, and this time they did not neglect education—down to the veriest reflex.

The results? A red herring that would rather die than get its tail wet. The slightest suggestion of humidity filled the new herring with dread. Though control had done its perfect work, and, with the possible exception of the red herring, everyone was happy. Surely this year's Lenin Prize would go to scientists at Smolensk University.

But the world must see this triumph of Soviet research. The commissar who had thought of education must take the fish on tour.

Somewhere in Hungary the tragedy occurred. Quite accidentally, according to official reports, the red herring fell into a pool of water.

Deep in the green translucent stuff it lay—eyes and gills clamped shut—afraid to move lest it become wetter. And, of course, it could not breathe—every reflex said no to that. Never did a fish so wet feel more like a fish out of water.

But breathe it must, and there was nothing else to breathe. Only water. So the red herring drew a tentative gillful.

Its eyes bulged. It breathed again. Its jaw flew open. It flicked a fin . . . then another . . . and wiggled with delight. Then it darted away. The fish had discovered water!

And with that same kind of wonder, MEN, conditioned by the rapid encroachment of Socialism, must discover that freedom is indivisible.

Quoted, in part, from the Presbyterian Journal, September 6, 1961.

Margarines And Coronary Artery Disease

The Food and Drug Administration has banned references to blood cholesterol and heart disease in the labeling of products containing polyunsaturated fatty acids; but this ban has not discouraged the introduction of new margarines containing oils with a high concentration of unsaturated faty acids, and their promotion, directly or indirectly, as dietary aids in combating heart disease.

The question for the physician is whether he should advise patients, especially those with a personal or family history of atherosclerosis, to use one of the new product. To start with, there is no evidence that simply substituting one of the new margarines for ordinary margarine or for butter, in an otherwise unchanged diet, will lower blood lipids or favorably influence the course of any vascular disease. It is true that a diet in which about *three quarters of all the fat consumed is polyunsaturated* will reduce serum cholesterol; but it has not been established that such reduction will have any effect on the incidence or severity of atherosclerosis or coronary disease.

Reprinted from the Medical Letter on Drugs and Therapeutics, New York, N. Y.

W. B. SAUNDERS COMPANY features the following recent books in their full page advertisement appearing elsewhere in this issue:

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NEW MEDICARE INFORMATION

Poliomyelitis And Influenza Immunization As Part Of Complete Maternity Care

1. Amendment—ODMC Letter No. 19, 9 September 1957, is amended by deletion of the phrase "including those receiving obstetrical and maternity care" where it appears in Paragraph 2 thereof.

2. General—In keeping with current practices related to the medical management of pregnancy, immunization parenterally administered against poliomyelitis and influenza are authorized benefits under the Dependents' Medical Care Program. These benefits are subject to the limiting conditions stated below. Such immunizations are considered, for the purposes of the Medicare Program, to be a part of complete maternity care.

3. Effective Date—The provisions of this letter will be applicable to all physicians' claims paid by fiscal administrators on and after 1 November 1961 bearing a "From" date not earlier than 1 March 1961.

4. Authorized Services—The attending physician will be reimbursed for his cost of poliomyelitis and/or influenza vaccine administered by injection to a dependent eligible to receive care from civilian sources under the Dependents' Medical Care Program when he determines that such immunizations are necessary for proper management of the maternity case. Separate payment is not authorized for professional services and other supplies furnished in the administration of the vaccines, since remuneration is included within the allowances for prenatal care.

5 Processing of Claims—Fiscal administrators paying physicians' claims may be reimbursed, as allowable costs, for payments made to attending physicians for claimed cost of poliomyelitis and/or influenza vaccines when:

a. Services furnished are for medical management of maternity care.

b. The cost of the vaccine is adequately justified. A charge of $1.00 per injection is considered reasonable cost of the vaccine; therefore, charges not in excess of $1.00 per injection, when claimed, may be paid without the necessity for specific justification. When the claimed amount is in excess of $1.00 per injection, justification is necessary. Adequate justification will include the manufacturer's name, the attending physician's cost and source of supply.

6. Announcement—Contractors are urged to announce this adjustment in the Dependents' Medical Care Program through their periodic publications. Cost of individual announcement to physicians is not an allowable cost.

W. D. Graham
Brigadier General, MC, USA
Executive Director

Letter To The Editor

November 14, 1961

Denis S. O'Connor, M.D.
Managing Editor
Connecticut Medicine
160 St. Ronan Street
New Haven 11, Connecticut

Dear Dr. O'Connor:

The article on "Aspiration For Cephalhematoma" in the October issue of *Connecticut Medicine* is contrary to the experience of many pediatricians.

The greatest hazard of aspiration is introduction of infection. Unless serious sequelae are to be expected in untreated cases, one must have solid grounds for active intervention. In a good many years of medical practice, much of it on very active large hospital services, we have seen only one cephalhematoma become infected spontaneously. This was in a premature who had coincidentally incurred a small skin abrasion over the area during delivery.

Realizing that a significant number of cephalhematoma are associated with skull fractures and leaking C.S.F. fluid, infection introduced through aspiration plays a more serious role than in simple uncomplicated extracranial lesions.

We feel that a serious backward step would be taken if the philosophy of this article were generally adopted. How many "deformed" heads does one see in the preschool examinations at age five traceable to cephalhematoma? They are virtually unknown. The osteoclastic activity on the outer table gradually reshapes the skull during the early years of rapid growth.

Since a cephalhematoma left alone for all practical purposes does not become infected and since permanent deformity is not a problem, the risks of introducing infection by aspiration are not justified.

In our opinion aspiration of cephalhematoma is a step in the wrong direction and should be discouraged.

Signed,

C. H. Crothers
Edward H. Scherr
Roswell D. Johnson
H. J. Greenblatt

THE PRESIDENT'S PAGE

On October 23 and 24, 1961, the Annual Conference of Blue Shield Plans was held in Chicago. Its theme—"New Dimensions for Progress." Approximately 400 persons were in attendance and the majority of these were physicians, many of whom serve on the Board of Directors of the various Blue Shield Plans. Mr. Coolidge, President of CMS, Inc., generously extended an invitation to the President of your Society to attend the meeting and in view of the importance of Blue Shield, both to patient and physician, I was very pleased to accept the offer. The program was interesting and stimulating; the caliber of the speakers outstanding. During an afternoon session, all those participating in the conference were divided into ten groups which held discussions on the topic "The five most needed improvements in Blue Shield today and how they may be achieved." I do not know what the various discussion groups concluded but I am sure that one of the program speakers held a position which should qualify him as an expert in the area of what the public looks for from Blue Cross and Blue Shield.

The speaker I refer to is Mr. Andrew E. Ruddock, Director, Bureau of Retirement, United States Civil Service Commission. This government official has jurisdiction over the Federal Employee Health Benefits Program which covers about five million persons with forty different insurance carriers participating in the underwriting of the insurance. The beneficiaries have free choice of plan with which they are insured and about fifty-five per cent of the five million covered have chosen Blue Cross-Blue Shield. The subscriber pays one-third to one-half of the cost. When given the choice of picking a low option versus a high option plan, less than twenty per cent chose the low option plan. The plan is experience rated and there is no waiting period even for obstetrics, no exclusion of previously existing diseases, the benefits may be carried into retirement and there is major medical coverage.

A questionnaire of 120,000 beneficiaries who had occasion to use their insurance indicated that eighty-one per cent of the subscribers were fully satisfied with their insurance. The causes of dissatisfaction cited by the other nineteen per cent were first, the fee schedules were unrealistic in that only one-third of the actual charges were met. The example was given of a patient who complained of having to pay an additional $100 to his surgeon and an additional $35 to the surgeon's assistant and $40 to the anesthetist. Delay in processing and paying of claims was another source of irritation, a three months delay being cited between filing of a claim and its settlement. Too much paper work, failure to cover out of hospital diagnostic studies were other complaints.

Mr. Ruddock suggested to Blue Cross and Blue Shield the adoption of a full service benefit principle and the elimination of income levels; the improvement of additional and supplemental benefits, simplification of claim forms and an increased capacity for servicing national accounts. Mr. Ruddock's suggestion had a familiar ring because much of the same advice was heard earlier at a Northeast Blue Shield Professional Relations meeting in Cranston, Rhode Island. We physicians are interested in hearing from the subscribers as to what they seek from Blue Cross and Blue Shield and we try to be reasonable in attaining these objectives; in turn we are hopeful that the subscribers and the plans will listen as attentively to the opinions of the participating physicians.

Thomas M. Feeney, m.d.

The Connecticut State Medical Society

November 21, 1961

160 ST. RONAN STREET
NEW HAVEN 11, CONNECTICUT
UNIVERSITY 5-0587

Senator Benjamin A. Smith, Chairman
Senate Special Committee on Aging
Senate Office Building
Washington 25, D. C.

My dear Senator Smith:

On behalf of the more than 3300 physician members of the Connecticut State Medical Society, and by means of this open letter, I desire to convey to you and the public certain observations on the hearing conducted by your Committee at Hartford yesterday. In so doing, please be assured that I am neither offering nor implying any personal criticism of you or your associates on the Senate Special Commitee on Aging, but only of the manner in which the hearing was planned and conducted.

Firstly, I find it most difficult to understand how such an important senatorial investigative body as yours could have come to such an important city as Hartford to hold hearings on such an important matter as problems of the aging and yet have received so little advance public notice and so little pre-hearing publicity. Had it not been for a few unconfirmable rumors and a spot radio announcement or two on November 19th, we at the office of the State Medical Society and a number of other voluntary health agencies would have been totally unaware that the hearing was to take place, let alone what facets of aging were to be explored by the Committee. Not only were we given no time to prepare and file a statement but, in addition, we remained in doubt that it would be permissable for us to even attend as spectators.

Secondly, I was greatly impressed with how relatively few people appeared in the forenoon to listen in on the informative and reassuring testimony filed by a number of state officials and others on the subject of "Nursing Homes", but this I attributed to the lack of advance notice. On the other hand, and for exactly the same reason, I was greatly surprised to observe how very many showed up for the "old-fashioned town meeting" session which followed later. At an event which was practically unknown and unheard of by the public at large, did it seem a little odd to you—as it did to some of us—that so many, many announced representatives of organized labor just happened to wander into the hall at the very moment at which depositions on so-called "medical care for the aged" were ruled to be in order? It certainly appeared to us that they couldn't have arrived at a more propitious moment if they had known beforehand what the agenda was to be. Do you suppose somewhere along the line there might have been a little privileged "leak" on the hearing to this select group?

The reason I raise this question is that one union spokesman from "out of town" expressed regrets that he "only had time to bring one carload of old folks to testify" whereas I don't believe more than one or two doctors in the whole state even knew the Committee was in Hartford, let alone what was to be heard before it.

Finally, may I say I was most disappointed that when the discussions seemed to drift so spontaneously into the very complex aged medical care matter, no one on the Committee either defined or asked for a definition of what was being discussed. As a consequence, the protests of senior citizens against lack of job opportunities, unsatisfactory family relationships, the ravages of inflation on savings and pensions, hardships brought on by alleged inequities in the tax structure, etc. became all mixed up with problems associated with the costs of health services. Now, with all the state-level mechanisms for assisting them in meeting these latter costs available right now in Connecticut, it does seem too bad that no one in charge felt it worth-while to point out to them that the so highly-praised King-Anderson Bill does *not*, by any standard, propose to furnish "medical care for the aged" or even "prepaid health insurance", as most of these older people are apparently being led to believe. Careful analysis, I am confident, will show that HR 4222 would provide infinitely less broad coverage than a) our present welfare program, b) most of our well-patronized voluntary insurance programs, and c) our state Kerr-Mills program when it becomes effective next April. Had all this been explained to the audience before pretty much utter confusion set in, I feel the Committee would have performed a great service to those in attendance and, at the same time, have been able to gather as much valid "grass roots" information as was desired.

Perhaps on another occasion, your Committee will plan to hold a more balanced hearing—specifically on the medical care issue, and will give more prior notice to *all* who may be interested. Only in that way, it seems to me, could your members get a broad cross-section of Connecticut opinion and place in proper perspective the views of every group. At any rate, I am sure you were as pleased as we physicians were that whatever else may have had any light shed on it at the hearing, not a single person said he or she was not getting medical care or had ever been denied it, even if some felt they couldn't pay for it out of their own resources. Certainly that constitutes a real plus.

Again, may I assure you that my observations are intended to be constructive rather than critical.

Sincerely yours,

William R. Richards, m.d.
General Manager.

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An Invitation From The Physicians Forum

The other day, we received a communication from a comparatively unknown (to most doctors) medical organization which calls itself: "The Physicians Forum, Inc." The letter says it understands that "at one time" we had indicated an interest "in the provision of better medical care for the American people," and informs us that since this interest has now become nation-wide, it is "necessary for physicians to express their opposition to many of the policies of organized medicine." One effective channel through which they can do this, the circular suggests, is a strengthened Physicians Forum.

The remainder of the message, augmented by an illustrated leaflet which purports to be the official publication of the corporation, is devoted to delivering a series of pretty punishing body blows to the American Medical Association and what it stands for—many of which, it seems to us, are directed to land well below the level of the belt-buckle. A representative sample of these largely *non sequitur* attacks is contained in the leaflet's report on the recent King-Anderson Bill hearing in which it is said that: "Despte frequent harassment by several conservative Congressmen, Dr. Butler (The Forum's spokesman), in his testimony, was able to present an incisive refutation of the AMA's 'anachronistic and unscientific political views, and its dishonest and unethical political activities.' " Now, we're quite familiar with most of what Dr. Butler evidently set out to sell the Congressional Committee. We've heard so much of that sort of thing lately from Secretary Ribicoff via his right hand man, Wilbur J. Cohen, and from Aimee Forand and so many other self-styled "liberals," it's getting to be kind of old hat. But that word "anachronistic" bothered us some, and we might just as well confess we had to go look it up in the office dictionary. Its meaning and use, we found, is to describe views or propositions as chronologically incorrect or out of keeping with the times.

We read through the whole presentation of The Forum's case pretty thoroughly and, in truth, we found nothing much new or especially convincing in it. As we sat back in our chair to think a little bit more about what they said, though, our mind kept going back to that word "anachronistic." The entire basis for the AMA's case against compulsory, government-controlled medical care programs is that the individual's freedom to choose has to be seriously curtailed or completely abrogated in order to make them work, and, no matter how we looked at it, we just couldn't bring ourselves to believe that freedom is *ever* really "out of keeping with the times," no matter what period in history, past or present, we happen to be talking about.

The Forum's message brought one bit of good news with it, however—at least as far as we're concerned. In a concluding P.S., it noted: "Our records show that you are not a member," and for that we are thankful. Why, good grief, we've got our hands so full with just trying to present clearly to the public what the majority of doctors believe in, we just wouldn't have time to join up with an outfit that wants us to help "express opposition to the policies of organized medicine." Organized medicine? For Heaven's sake! That's *us* they're talking about!

W. R. R.

COUNCIL MEETING

Thursday, November 16, 1961

A meeting of the Council was called to order by the President, Dr. Feeney, in the absence of Dr. Gilman, the Chairman, at 2:30 P.M. on Thursday, November 16, 1961. Present in addition to the President were: Drs. Deming, Goldberg, Hess, O'Connor, Caplan, Cullen, Scully, Wilson, Ogden, Bradley, Cornwell, Katzin, Grant, Rentsch, Murray, Jr., Gorman, Martin, Egan, and Phillips. Also present: Mrs. Josephine P. Lindquist, Mr. James G. Burch, and Dr. Richards. Absent were: Drs. Gardner, Purnell, Gilman, Gevalt, Davis, Hastings, and Chartier.

The minutes of the Council meeting of October 11, 1961, were approved as printed.

PROPOSED AMENDMENT TO THE BYLAWS. E. Tremain Bradley, Councilor from the Fairfield County Medical Association proposed an amendment to the Bylaws which read as follows:

Under Article XIV, Section 2 of the proposed new Bylaws, add: "Each component county medical association shall stimulate, coordinate, foster and cooperate with the local medical societies in that county."

It was VOTED to transmit this proposal to the Subcommittee to Study and Revise the Bylaws for consideration and report.

It was further VOTED to transmit to the Subcommittee to Study and Revise the Bylaws and to each component county medical association the following Resolution:

BE IT RESOLVED: That the Council of the Connecticut State Medical Society urge each component county medical association to take measures to establish contact with local medical societies and hospital medical staffs within its county area, for the purpose of transmitting the message of organized medicine to those groups and setting up closer lines of communication between the county association and those groups

PROPOSED BYLAW REVISIONS. The General Manager's office presented the Council with some six items regarding the proposed new Bylaws, to be acted upon by the House of Delegates on December 7th, in which there appeared to be an inconsistency or a need for clarification. It was VOTED to refer all these matters to the Subcommittee to Study and Revise the Bylaws. (AMB 2/8/61 "A")

ESTABLISHMENT OF A "COMMITTEE ON EMERGENCY MEDICAL SERVICE." Upon the recommendation of John Shoukimas, Hartford, who represented the Society at a recently held Medical Self-Help Training Workshop, it was VOTED to establish a Council-appointed Committee on Emergency Medical Service and to direct the Chairman of the Council to appoint such a committee and designate its chairman. This action was in keeping with a similar recommendation made by the Committee of Past Presidents and others, which was considered later in the agenda.

THE 1962 BUDGET. Printed copies of the proposed budget for 1962 had been distributed to all members of the Council prior to the meeting, and Isadore S. Goldberg reported on the various items which were changed materially from the 1961 Budget. After a detailed review, it was VOTED to approve the proposed Budget for 1962, to transmit it to the House of Delegates on December 7, 1961, and to adopt the recommendation of the Budget Committee that the annual dues of the Society remain at $33 for the year 1962. (AMB 11/16/61 "A")

CONNECTICUT MEDICAL SERVICE, INC. Two resolutions from county medical associations were received by the Council as follows:

From the Fairfield County Medical Association, October 4, 1961—

"RESOLVED: That the Board of Trustees of the Fairfield County Medical Association notify the Council of the Connecticut State Medical Society that (this) Association disapproves of any 'across the board' elevation in the Service Benefits levels of the present CMS Preferred Contract, and that any attempt to do so constitutes a major change in such contract which would require ratification by each county association."

From the New Haven County Medical Association, October 19, 1961—

"WHEREAS: The State Insurance Commissioner is putting pressure on CMS to raise the Service Benefits level of the CMS Preferred Contract which would ultimately cause the subscribers to pay higher premiums for it; and

WHEREAS: The Physicians of Connecticut have a voice in this matter for the purpose of safeguarding the interests of the low income group, especially the low income group over age 65, and

WHEREAS: The Physicians of Connecticut hold that the new Community Contract provides higher service benefits levels for other groups, while the Preferred Contract provides Service Benefits for the very group we determined to assist by sponsoring CMS, now therefore:

BE IT RESOLVED: That New Haven County Medical Association requests the Council of the Connecticut State Medical Society to resist all pressures from any source designed to raise service benefits limits of the Preferred Contract, and it is further

RESOLVED: That the New Haven County Medical Association requests the Council to urge the Board of Directors of CMS to stand firm against such pressures, in order to show that the Board is operating CMS in the Public Interest"

It was VOTED to transmit these two county-adopted resolutions to the Board of Directors of CMS, Inc as information, and to direct the Chairman of the Council to apprise the House of Delegates of this action in his report to the House on December 7, 1961.

CONNECTICUT CONFERENCE ON MEDICAL QUACKERY. Franklin M. Foote, Hartford, State Commissioner of Health, joined the Council when this item was discussed. Dr. Foote, Dr. Caplan and others presented information and constructive ideas with reference to the possibility of putting on, in Connecticut, a Conference on Medical Quackery similar to the one conducted by the AMA and the Food and Drug Administration in Washington, D.C. last month. Various aspects of this proposal were reviewed, and it was then VOTED to refer the proposal to the Society's Committee on Public Relations for study and report back to the Council. Dr. Foote also made some proposals relative to regulations for licensing small hospitals which were considered and acted upon as a separate item later in the agenda for this meeting.

INVITATIONS TO MEETINGS.

a) *Second National Conference of the Joint Council to Improve the Health Care of the Aged.* It was VOTED to request the Chairman of the Committee on Aging or his designate to attend this Conference as a representative of the Society, and to report to the Council on his attendance.

b) *Regional Meeting of the U. S. Chamber of Commerce.* Being informed of a meeting to be held in New York on matters pertaining to the financing of medical care for the aged, under the auspices of the U. S. Chamber of Commerce, the General Manager requested members of the Council to file with his office their names and the names of others who might be interested in attending this New York meeting on December 18th so that the Chamber may invite them formally to be present.

c) *AMA Meeting in Denver—November 26, 1961.* It was VOTED to request the President or his designate to attend the Meeting of Presidents and Other Executives of State Medical Societies, and related meetings of interest to him, which will be held in conjunction with the semi-annual meeting of the AMA, beginning on Sunday, November 26, 1961; and it was further VOTED to defray the expenses of the President or his designate incurred as the result of such attendance

REPORT AND RECOMMENDATIONS OF THE COMMITTEE OF PAST PRESIDENTS AND OTHERS.

a) Upon recommendation of this Committee, it was VOTED to present to the House of Delegates, for consideration and action on December 7, 1961, a resolution relative to the formation of a medical political action committee among members of the Society. The resolution reads as follows:

WHEREAS: Organized medicine's views on health care and its quality and its financing are not always being adequately and effectively conveyed to members of legislative bodies, and

WHEREAS: Some candidates for public office and incumbent office holders often tend to minimize or ignore the opinions of organized medicine, apparently because they do not feel that the health professions constitute an important political force in public affairs, and

WHEREAS: Organized medicine has an obligation and duty, albeit politically non-partisan, to provide leadership to the people of the United States in matters pertaining to medical care and health, both personal and public, and

WHEREAS: The preservation of freedom in all fields of American enterprise is identical with, and in large measure dependent on, its preservation in the private practice system of medical care, therefore be it,

RESOLVED: That the Council of the Connecticut State Medical Society commend and endorse the purposes and efforts of members of the Society who, on their own initiative, may choose to form or participate in a Connecticut medical political action committee, either as an independent, state-level organization or one which wishes to coordinate its work with the American Medical Political Action Committee.

b) Upon recommendation of this Committee, it was VOTED to refer to the Committee on Public Relations, for evaluation and report, a proposal that the Society undertake to put on a Connecticut Conference on the quality and costs of health care in the State and insurance and prepayment plans which are offered to Connecticut residents to help them pay for the costs of health services. The PR Committee is asked to report at the next Council meeting.

c) Upon recommendation of this committee, and as described in Item No. 4 of these minutes, it was VOTED to re-establish a committee on casualty planning, such committee to be called a Committee on Emergency Medical Service.

ELECTION OF STUDENT MEMBERS. Thirteen eligible candidates were elected to student membership.

MEDICARE CONTRACT. On joint recommendation of the Committee on Third Party Payments and the Committee on Medicare Plan, it was VOTED to adopt the following policies with respect to the current Medicare Contract and to transmit same to the Office for Dependents' Medical Care:

1. That the Medicare Contract submitted by the Medicare Committee of the Connecticut State Medical Society be approved by the Council, in principle.

2. That negotiations be entered into with the proper government agencies to authorize use of a suitable "Fee Guide." The joint meeting of the Committee on Third Party Payments and the Committee on Medicare Plan consider it unrealistic for physicians to render services without the benefit of a "Fee Guide" even though the usual "fee" is charged to those with a *Family Income* of less than $4,500. The individual physician charges what he feels is a reasonable fee for services. However, there is a wide latitude in what is considered a reasonable fee by physicians. Practice in high cost areas in various parts of this state, professional qualifications as specialty board certification and experience are important factors in determining the doctor's fee. The Committee, therefore, feels that guidance is necessary in the special category of Medicare.

3. That the Contract include the following clause. When a service is performed for a Medicare beneficiary who is also eligible to receive payments from other insurance agencies for the same procedure the physician may make a charge in addition to the Medicare payment. The total charges to the beneficiary shall not exceed the total amount of actual payment by Medicare and the insurance company.

This is in conformity with the policy of all contracts for low income groups covered by the Connecticut Medical Service. (See Participating Physicians Handbook Connecticut CMS revision of September 1, 1961, page 38, caption: Service Benefits with other Insurance Coverage.)

CONNECTICUT HEALTH LEAGUE. In reply to a questionnaire submitted by the Connecticut Health League on the general question as to whether the league should become active in state and national legislative matters, it was VOTED to reply to the questionnaire in the negative.

VETERANS ADMINISTRATION FEE SCHEDULE FOR 1961.

After thoroughly reviewing circumstances of delay in transmitting the 1961 VA Fee Schedule to the Council, it was VOTED to approve the schedule as presented by the Committee on Medical Care of Veterans and/or the Committee on Third Party Payments.

JOINT CONFERENCE COMMITTEE WITH THE CONNECTICUT BAR ASSOCIATION. On the recommendation of the Joint Conference Committee, it was VOTED to authorize the Committee to plan and conduct a "Symposium on the Impartial Medical Expert in Liability Cases," and to authorize the expenditure of not more than $100 by the Committee as the Society's proportionate share of anticipated costs of the Symposium.

COMMITTEE ON AMEF. On the recommendation of Walter P. Kosar, Chairman of the AMEF Committee, it was VOTED to transmit a letter of solicitation for AMEF contributions to all members of the Society, but to accomplish this by giving such a letter prominent display in the December issue of CONNECTICUT MEDICINE rather than through a direct membership mailing.

PLANS FOR NEW MEDICAL-DENTAL SCHOOL. At the suggestion of James R. Cullen, Hartford, it was VOTED to request the President to communicate with Dr. Albert N. Jorgensen of the University of Connecticut, offering to Dr. Jorgensen all such assistance as the Society may be able to provide, on request, in the planning work being done on the new medical-dental school.

REGULATIONS FOR LICENSING SMALL HOSPITALS. As mentioned in Item No. 7 of these minutes, Franklin M. Foote, State Commissioner of Health, requested the Council to appoint a representative to serve with a committee he is forming to make plans for a conference on the subject of regulations for the licensing of small general hospitals. Dr. Foote made reference to such matters as staffing, the quality and availability of laboratory facilities, etc. as being pertinent to the nature of the conference he has in mind. It was VOTED to appoint Leo M. Trifari, Chairman of the Committee on Hospitals, to represent the Society on the planning committee, and to appoint later a larger group of representatives to the conference, including, among others, physicians acquainted with the fields of enesthesiology, radiology, pathology and surgery. It was further VOTED to refer the proposal to the Committee on Hospitals for continuing study and assistance of its chairman.

DATE OF NEXT MEETING. It was VOTED that the Chairman, in consultation with the General Manager, set the date and time of the next Council meeting.

PLACEMENT OPPORTUNITIES

The Society's Placement Service is in receipt of the following:

....WANTED: Residency physician in hospital, Fairfield County.

General Practitioner and Pediatrician in Fairfield County.

Pediatrician in New Britain Area.

General Practitioner in New Hartford.

General Practitioner in Middlesex County.

General Practitioner in Windham County.

General Practitioner in Hartford area.

New Members

FAIRFIELD COUNTY

Robert W. Berry, Bridgeport
Johannes P. Braat, Stamford
Michael A. Browne, Bridgeport
Louis D. Browning, Jr., Stamford
Eugene C. Citrano, Trumbull
Paul J. Coleman, Danbury
Gerald Copeck, Stratford
Keith Custer, Fairfield
Daniel W. Doctor, Westport
Frank E. Dully, Jr., Shelton
Saul M. Feldman, Bridgeport
George J. Feroleto, Bridgeport
Louis A. Fuoco, Stamford
William H. Hampton, Greenwich
Carlos S. Lanting, Bridgeport
Joseph J. Michalka, III, Bridgeport
Henry D. Minot, Jr., Stamford
Paul D. Murphy, Newtown
Jack T. Orr, Danbury
Nathan Rosenbaum, Trumbull
Francis J. Scholan, Southport
Harold Steinberg, Norwalk
Alfred W. Wolfsohn, Stamford

HARTFORD COUNTY

Maxwell H. Bloomberg, New Britain
Seymour Byer, New Britain
Julio N. Coelho, Rocky Hill
Francis T. Curis, Hartford
Esmail K. Faiaz, Hartford
Stuart Falk, Bristol
Walter R. Gilliam, Hartford
Josias H. Hawkins, Hartford
Michael Jacuch, Hartford
Donald W. Johnson, Hartford
Robert M. Jreissaty, Hartford
Young W. Kim, Bristol
Arnold M. Koff, Avon
Mark E. Lynch, Avon
Simon Meleck, New Britain
Hans S. Menco, Storrs
Alexander B. Milyko, West Hartford
Walter C. Murray, Plainville
Frederick J. O'Brien, Hartford
Edward J. Ottenheimer, Jr., Bloomfield
Silvio F. Pace, Wethersfield
William E. L. Stewart, Kensington
Robert S. Sultar, Kensington
Richard F. Taylor, Hartford
Jacob A. Van Der Werff, Hartford
William S. Vaun, Hartford
Raymond A. Weitzel, Manchester
Charles Zmijeski, Jr., Hartford

LITCHFIELD COUNTY

Henry F. Farrell, Torrington
Edward D. Kaplan, Winsted
David W. Ruggles, Canaan
Mildred Stanley, New Milford

MIDDLESEX COUNTY

Julio A. Carias, Middletown
Suk C. Chang, Middletown
Charles G. Daukas, Middletown
George J. Lantos, Middletown, New York
George C. Szemes, Middletown
Searle K. Welling, Middletown

NEW HAVEN COUNTY

Robert S. Adams, Waterbury
Jose C. Aguiar, New Haven
Neil P. Beall, Branford
Klaus G. Bensch, New Haven
Philip E. Benton, Southbury
Raymond E. Bradley, Jr., Derby
John C. Brigham, New Haven
Paul Calabresi, New Haven
Harry C. Conte, New Haven
Leonard Cutler, New Haven
Daniel A. D'Angelo, Middlebury
Donald S. Dock, New Haven
John L. Doppman, New Haven
James B. Fanning, North Haven
Carl V. Granger, New Haven
Don C. Higgins, New Haven
Demetrios B. Kalas, New Haven
John J. Kneisel, New Haven
William E. Lattanzi, West Haven
Yin Chen Lee, Waterbury
Melvin Lewis, New Haven
Paul T. C. Lin, Derby
Woodrow W. Lindenmuth, New Haven
Anthony D. Mancini, East Haven
Dwight F. Miller, Derby
Saul S. Milles, Hamden
Morgan F. Moore, Waterbury
Miceal S. O'Maille, Milford
Robert H. Peters, Jr., New Haven
Elliot Polsky, New Haven
Joseph G. Rossi, Hamden
Novello E. Ruggiero, Waterbury
Richard A. Selzer, New Haven
Wichard A. J. van Heuven, Hamden
Dianna E. Van Orden, New Haven

NEW LONDON COUNTY

Edward W. Allen, Old Lyme
Donald W. Cooper, New London
Roger A. Graham, Norwich
Donald H. Kaplan, Groton
Theodore M. Odland, Norwich
Ernesto R. Soriano, Norwich
Me Iung Ting, Niantic

TOLLAND COUNTY

Donld McCaughan, Rockville

WINDHAM COUNTY

Ivor P. Smyth, Storrs

The Connecticut State Medical Society

160 ST. RONAN STREET
NEW HAVEN 11, CONNECTICUT
UNIVERSITY 5-0587

November 21, 1961

Dear Fellow Physician:

The deans and administrators of all our medical schools are faced with a three-fold challenge: to constantly maintain the present high standards of medical education—to incorporate into existing curricula the multitude of advancements achieved annually in the field of medicine—and to expand the student capacity to meet the physician requirements of an "exploding population."

A very important way for you to be of direct assistance to the deans is to make a contribution to the American Medical Education Foundation.

Since its founding it has channeled over 10 million dollars to the medical schools for unrestricted purposes. The AMEF has become the symbol of organized medicine's endorsement of medical education, and now more than ever it is important that we continue this effort. You can designate a school and be assured it will receive 100% of the gift, or you may give your gift undesignated and have part of it go to each of the nation's 85 medical schools.

The purpose of the AMEF and the needs of the medical schools are greater now as the Foundation begins its second decade than ever before.

It is a challenge for all of us—let's meet it with a check today! There is no better way to invest in the future of medicine.

Sincerely yours,

Walter P. Kosar, M.D., Chairman
State Committee on AMEF

WPK:r

**CMS extends its best wishes
to the Physicians of Connecticut
for a happy holiday season.**

*Merry Christmas and
a Happy New Year*

Clinical Medicine

Salt And Hypertension

Louis H. Nahum, m.d., *New Haven*

The Author. *Lecturer in Physiology, Yale University School of Medicine, New Haven. Consulant in Medicine, Hospital of St. Raphael, New Haven. Grace-New Haven Community Hospital, New Haven. Griffin Hospital, Derby, Middlesex Hospital, Middletown. Cardiologist at Milford Hospital, Milford.*

One of the baffling problems in medicine and physiology has been the problem of hypertension. The difficulty does not lie in a matter of definition as to what hypertension is, nor does it rest upon a lack of understanding of where in the vascular tree the fundamental defect is. We know that it is due directly to an increase in the resistance to the flow of arterial blood through the arterioles into the capillaries. This is known as peripheral resistance. What the cause of the narrowing of the arterioles can be is where the problem begins.

Arteriolar constriction is under the control of the nervous system and the opening and closing of these vessels in accordance with the need of an individual organ is basic in the normal operations of the various organs and tissues. In fact, severing either peripherally or the afferent portion of the reflex arc can remove regulatory mechanisms. Many experiments of this type have been performed as for example, denervating the carotid sinus and thereby unbalancing the vascular hemeostatic mechanisms thus leading to permanent hypertension. However, in clinical hypertension the neural reflex controls are intact and cannot be invoked to explain any form of clinical hypertension. However, the arterioles can be narrowed passively either by increased artereolar smooth muscle tone or decrease of lumen caused by swelling of the muscle cell or both.

Increase in blood volume can lead to hypertension by increasing cardiac output, but hypertensives do not have an increased cardiac output although it is not known whether hypervolemia precedes the onset of essential hypertension. Hormones can produce narrowing of the arteriolar lumen, such as pituitrin, nor-epinephrin, angiotensin, but none of these substances have been demonstrated to be in excess in hypertensive cases with the exception of the hypertension of adrenal origin, malignant hypertension, and eclampsia.

We are thus left with a need to search for a mechanism which will narrow the lumen of arterioles and which may be operating in the production of clinical hypertension. If the arteriolar lumen is not narrowed as a result of nervous or ordinarily known hormonal influences then what is it due to? It is clear enough that anything that would cause hydration of the smooth muscle cell could reduce the lumen and if the same mechanism would increase the muscle tones of the cell, the lumen would be further reduced. At this point we are faced with a large mass of seemingly unrelated observations; Renal disease is closely related to hypertension, nevertheless animals develop hypertension without kidneys and furthermore a large number of clinical hypertensives do not have demonstrable renal disease. To be sure the word "demonstrable" does not imply its opposite that if renal disease is not demonstrable, therefore it isn't there. More and more, hypertension is being shown by recently developed angiographic methods to be due to sclerotic renal arteries.

There is no doubt that since Goldblatt used the renal artery clip to produce hypertension experimentally, the penetration into the basic mechanisms causing arteriolar narrowing and hypertension has proceeded apace. But one thing remains clear i.e. that hypertension caused by impairment of renal blood flow must operate ultimately upon the lumen of the arterioles, otherwise how explain hypertension in animals with both kidneys removed. Again, this of course must be predicated upon the wish to believe that there is one basic mechanism involved in all forms of hypertension and that all clinical forms of hypertension operate through one such basic mechanism. If such a mechanism were to be discovered it will then be necessary to reveal how it becomes disturbed in the various diverse clinical hypertensive states.

Science grows by recognizing significant observations out of the mass of superficially unrelated facts and then formulation of a hypothesis which can be tested experimentally. What are some of the seemingly unrelated types of hypertension? There is what is designated as "the essential form in which a high diastolic pressure is the main feature. The malignant form in which renal involvement, arterial degeneration, and rapid progression are the main features. Then there is the form found in toxemia of pregnancy which is quickly reversible after delivery; the hypertension of aldosteronism, pheochromocytoma and many others.

Observations On Salt And Hypertension

Gumbard and Beaugard in 1905[1] obtained encouraging results in hypertension with salt restriction. Allen in 1920[2,3] rediscovered Gumbard's work and became a strong protagonist of salt restriction as a method of treating hypertension. In 1944[4] Kempner renewed the idea by his rice diet which we now know was in essence a form of severe salt restriction.

It should be noted that about twenty years elapsed between each of these studies and in the intervening time no progress was made. In fact it is questionable whether any isolated observation no matter how many times it is rediscovered can lead to a solution of a problem without someone asking a significant question. With the advance of our knowledge of renal physiology and of clinical chemistry, it became possible to ask a question about salt in relation to hypertension which could be put to the experimental test.

If salt is related to hypertension, then it should be possible to produce it by a salt loading process. This is now generally documented by many experiments.[4] Rats drinking 1 per cent NaCL as sole drinking fluid and also receiving desoxycorticosteron (DOCA) will develop hypertension in 10 days. Take away the salt and the blood pressure returns to normal but recurs again if salt is given as before. The same phenomenon can be produced with aldosterone and salt. If DOCA and salt are kept up for three months then hypertension is permanent and does not disappear even after salt and DOCA are withheld. It is clear salt can be used experimentally to produce hypertension which for a while is reversible, but after a while becomes permanent.

If salt is involved in hypertension then plasma of hypertensives should contain more salt than the plasma of normotensives. This was in fact found to be the case. In human patients with essential hypertension the average plasma concentration of sodium is about 2-5 Mcg. per liter higher than in normotensives. Furthermore if hypertension is severe the potassium is 3-5 Mcg. per liter lower then normal, this is probable compensation for the higher sodium content. The higher sodium content of plasma is not followed by a higher chloride content so that there is an increase in sodium to chloride ratio.

If salt is involved in hypertension and the hypertension is caused by a narrowing of the lumen of the arterioles, then smooth vascular muscle should show an increase in content of sodium. This in fact was found to be the case for smooth muscle of the larger arteries. They undergo physiological changes in hypertension by swelling and increasing their sodium content. In hypertensive rats the smooth muscle of the aorta showed an increase in sodium and water per unit and was so greatly increased in tone that nor-epinephrin caused no further contraction. The renal artery in hypertension showed a significant increase in sodium and water content as compared to normal renal arteries. If the same degree of swelling also occurred in the smooth muscle of arterioles there would be enough narrowing of the lumen to account for the hypertension.

If salt is involved in hypertension its elimination from the body through restriction of sodium intake should be helpful in those cases of hypertension in which extraction of salt from the arteriolar musculature will increase their lumen and in which arterial disease has not yet taken place. Numerous observations including the early ones on salt restriction quoted above attest to the usefulness of such a practice in many patients though not all. If sodium is gradually lowered to 400, 200 and 100 mcg, per day the average reduction in blood pressure can be 30 mm. systolic and 16 mm. Hg. diastolic, and such reduction can even result in resolution of hemorrhages, exudates, papilledema in the optic fundus, a reduction in heart size, disappearance of electrocardiographic abnormalities and prolongation of life. Facilitating salt excretion by diuretics greatly contributes to the decline in pressure in many hypertensive patients. However, the condition of the kidney is primary as to whether hypertension can be improved and whether extracellular fluid will remain normal on a low sodium diet. The converse is also true. Patients with essential hypertension that ingest 10 or more grams of sodium a day show a definitive statistical increase in the level of arterial pressure.[6]

Can dietary sodium account for some patients developing hypertension in the first place? If this were true, the epidemiologic evidence should show that populations on a low sodium diet should on the average show low arterial systolic and diastolic pressure. This is in fact found to be the case in Australian aborigenes, Greenland Eskimos, mountain dwelling Chinese tribes, the Guna Indians of Panama all of whom ingest less than 5 grams sodium chloride per day. Japanese farmers in Oketa prefecture have high arterial pressures, much cerebral hemorrhage, and ingest 20-35 grams of salt per day. They eat fish and vegetables preserved in salt. In nearby areas where salt intake is lower so is the average blood pressure. In the Bahamas where natives eat high salt in salt preserved foods, the average blood pressure is high. Finally an interesting study by Dahl at Brookhaven showed that of 1346 people examined 0.7 per cent had hypertension who did not salt their food, 6-8 per cent had hypertension who salted to taste and 10.5 per cent had hypertension who salted before tasting.

In evolution of terrestrial animals the total problem of survival included a scarcity of salt in the food and evolutionary forces tended to produce animals which were good at conserving sodium. The need of getting rid of salt has come about in the last 3000 years. Thus those people who conserve salt and are unable to excrete the excess, may react to biologically abnormal salt load by becoming hypertensive.

We are thus faced with a very interesting hypothesis namely that salt retention is an important mechanism in the genesis of hypertension. This occurs in system that are overloaded with salt and in patients who either overload their own systems by excessive salt intake or who are genetically salt retainers. The ultimate fault being swelling of the arteriolar musculature by salt inhibition, reduction of their lumen, increased peripheral resistance and hypertension.

From experimental animals we learn that in the early stages the disease is reversible by measures designed to eliminate salt but after a few months the disease is no longer reversible. Apparently the narrowing of the arteriolar lumen is now no longer susceptible to salt removal procedures. This same experience is found in man in whom only one-third are in the reversible stage when first placed on a salt elimination regime.

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The theories which embody our scientific ideas as a whole are of course indispensable as representations of science. They should also serve as a basis for new ideas. But as these theories and ideas are by no means inimitable truth, one must always be ready to abandon them, to alter them or to exchange them as soon as they cease to represent the truth. In a word we must alter theory to adapt it to nature, but not nature to adapt it to theory.

—Claude Bernard, *An Introduction To The Study Of Experimental Medicine*

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Workshop On Techniques Of Relative Value Studies

The time is now not far off when the Society will conduct its long-awaited Relative Value Study. Mr. Roscoe C. Edlund of Rogers, Slade and Hill, Consultant to the Committee on Relative Value Study, brings to light several interesting aspects of a project of this nature in the following report on his attendance at an A.M.A. Workshop.

KANSAS CITY, SEPTEMBER 16, 1961

Report by Roscoe C. Edlund of Rogers, Slade & Hill

Background

The Workshop was sponsored by the Committee on Medical Practices of the American Medical Association. The Workshop dealt mainly with broad principles, and not as much with actual detail as I should have liked for the benefit of Connecticut.

The Chairman of the AMA Committee, Lester D. Bibler, M.D., together with another member of the Committee, James M. Kolb, M.D., acted as chairmen and moderators. On behalf of AMA they expressed the belief that Relative Value is growing in acceptance in medicine, and that the Studies and Scales will have increasing usefulness as time goes on.

They also asked that each State Society which takes action in this field, keep AMA informed.

Counting myself for Connecticut, 23 were present from 16 State Medical Societies; Drs. Bibler and Kolb and three staff members from AMA; and one each from the American Society of Internal Medicine, the American Academy of General Practice, The Health Insurance Council, the Jackson County Medical Society (which is the county in which Kansas City is located), the Kansas Physicians Service (Blue Shield), and the magazine Medical Economics—a total of 34.

The day's discussion was tape-recorded, and ultimately AMA will send out a report. However, it may be some weeks before this becomes available.

Relative Value And The Law

At the Workshop, a certain amount of concern was expressed over the possibility that Federal and/or State law-enforcement authorities may question or attack the development of Relative Value Scales by medical organizations as constituting violation of Federal and/or State and/or common law prohibitions against conspiracy to restrain competition and fix prices.

Dr. Hoskins, California, states that in California pharmacists have been indicted for price-fixing, and that apparently authorities are now investigating real estate operators along a similar line. He adds that while Relative Value Scales are not dollar scales, nevertheless, when units are converted to dollars, questions of legality may be raised.

Mr. Hirsch of AMA's Law Department says that very definitely there are legal questions from the point of view of the effect of Relative Value Studies on standardization of fees. He points out that there is a difference between a third party (such as Blue Shield or a government agency) fixing fee schedules, and the doctors themselves through a Medical Society taking steps leading through a Relative Value Scale to a similar result. Mr. Hirsch indicates that in his opinion it is advisable for Medical Societies to secure carefully considered opinion on this matter from competent anti-trust attorneys, and to be aware of any risks involved.

As a comment of my own, there may be considerable difference, from a legal angle, between a Scale arrived at primarily through statistical analysis of fees actually being charged by physicians throughout a State, and a Scale arrived at through negotiation, discussion, and agreement between physicians. There may also be a difference between using an outside agency (like Rogers, Slade & Hill) for statistical analysis, and using an agency (such as a Blue Shield organization) which is sponsored by doctors and which may itself make use of the resulting Scale in fixing fees.

In any event, good sense seems to indicate the wisdom of Mr. Hirsch's advice to secure legal opinion. He points out that there are plenty of fee schedules which lawyers' organizations have created for lawyers, and that while these have not been proceeded against by government authorities, this may be because such fee schedules are so largely disregarded by the lawyers themselves. He intimates that organized medicine may not stand high in favor with Washington, in the light of opposition to Administration programs, and may therefore be more subject to attack than are the lawyers.

Make The Scale Useful And Usable

Dr. H. Dean Hoskins, one of the speakers said that like listings in a telephone directory, the nomenclature list of procedures must be *useful* and *usable.*

To be *useful,* the Scale and the list of procedures must be . . .

- —authentic
- —accurate
- —honest
- —credible
- —defendable against attack
- —free from self-interest or self-indulgence
- —thorough
- —realistic in reflecting (and not attempting to mold) the patterns of medical practice in the State concerned.

All this points to the necessity of the long, tedious and expensive task of collecting, tabulating, and analyzing the actual fees charged by doctors in private practice, rather than developing a Scale mainly or solely through Committee discussion.

Before sending out a Questionnaire he advised creating the complete list of procedures to be used in the published Scale, just as Connecticut has done. From the complete list he advises a Questionnaire of about 600 items, being sure that wtihin these 600 items there are at least 100 within which every practicing doctor will find items that he performs and on which he can fill in the fees he charges in normal practice.

Dr. Bell, Illinois, stated that they are using a Questionnaire of 750 procedures, which is just about the number in the presently-revised Connecticut list. However, I am not sure that Dr. Bell is accurate about this because I had previously been given to understand by others in Illinois, that they are using the AMA printed Questionnaire (which is free) and which lists 453 procedures. A number of State Societies have used the AMA Questionnaire, including Iowa, Kansas, Mississippi, and doubtless others.

For Usability

Dr. Hoskins, who was the Chairman of the Committee responsible for California's 1960 Relative Value Scale, and who was an especially valuable resource in the Workshop, as well as for me individually after the Workshop was over, advised that the format under which procedures are listed, should be arranged (as Connecticut proposes) in four Sections. . .

- —Medicine
- —Surgery
- —Radiology
- —Laboratory (rather than Pathology because many laboratory procedures do not involve pathology or a pathologist.)

Dr. Hoskins also advised Relative Values within each Section only; with specific and definite instructions (or "ground rules") within each separate Section. Some others, notably Michigan, do not agree with this. Dr. Bancroft of Nebraska says that they agree with California, and he adds that it is advantageous for each Section to be able to change its conversion factor when needed without affecting everybody else.

While Dr. Hoskins feels that the list of procedures should reflect medical practice within the State concerned, he pleads for maximum practicable uniformity in procedures and nomenclature in order that comparisons can be made between States and nationally.

In California, in earlier editions of the Relative Value Scale, values for most surgical procedures (except those marked with an asterisk) included two weeks aftercare, with the ground rule that aftercare beyond the two-week period was to be on a fee-for-service basis.

This turned out not to be satisfactory because many of those using the Scale disregard the two-weeks rule, with the result that the listed value becomes the total value, thus invalidating relativity between procedures, in as much as necessary aftercare varies from none to several months.

For this reason, California's 1960 Relative Value Scale (which is the latest) includes in the listed value for each surgical procedure the usual aftercare period; and because this period varies considerably between procedures, the exact period included for each procedure is listed. Care beyond this period, or because of usual complications, warrants additional compensation, as stated in the ground rules for surgery.

On the basis of the abve experience, Dr. Hoskins advises others to follow this latest California method for surgical procedures both in the Questionnaire and in the published Scale.

Medicine

California, Michigan, and others found it necessary to re-write the Medical Section of the original Blue Shield, California, and other listings. Further revisions will be necessary because, as the 1960 California Relative Value Scale points out, "clear-cut, accurate, concise delineation or description (of medical procedures) is semantically impossible." The best that California was able to accomplish. is seen in the Preface to their 1960 Edition and in their Section of Medicine.

Drs. Leader and Day of Michigan, indicate that Michigan, too, struggled long and hard with nomenclature for Medicine, as well as with aftercare for the listings on Surgery. These Michigan representatives at the Workship felt that they were not in position to give details, because their recommendations are to go before the Michigan House of Delegates in the week of September 18. Dr. Day stated that if the House approves the Committee's recommendations, Michigan will be glad to send copies on request to members of the Workshop.

Differences Of Opinion

I shall make clear that on many points there are differences of opinion, as for example . . .

- —on a small State Society committee not representing specialties vs. a large committee in which all specialties are represented.
- —on two-weeks aftercare listings for surgery vs. the California method described above
- —on a time basis for medicine, which internists are said to have developed after rejecting the California listings
- —on the methods and amount of prior promotion to the doctors of a State to "sell" them on the usefulness of a Relative Value Study and to persuade them to participate
- —on the desirability of personal interviews because doctors misunderstand the questions in a Questionnaire vs. the impossibility of doing this because of the expense involved and the months of time that would be required (nobody has tried personal interviews, as far as I am aware, but Iowa seems intrigued with the idea)
- —on the use of median vs. mode (Iowa states that on 85 to 90 per cent of procedures, the median and mode are identical; but both Iowa and California advise tabulating both)
- —on whether to tabulate specialists and generalists separately (California will provide tabulations to any specialty group at the expense of the group requesting this)
- —on whether on conversion factors to recognize the differences in overhead costs as between surgery, X-Ray, pathologists, and others
- — on whether to treat surgery, medicine, X-Ray, and laboratory separately as California does vs. treating all as one as Michigan does
- —on whether to send out, collect, and tabulate Questionnaires as California, Mississippi, Iowa, Kansas, Florida, and others have done, and as Illinois is doing right now, vs. doing the whole thing in Committee as some of these same States (and others) first did and as Nebraska and Pennsylvania have done. Florida's Dr. Zellner is emphatic in saying that on the basis of their experience, bad errors occur when Scales are not based on Questionnaires, and that Questionnaires additionally have the great value of giving all doctors in the State a sense of participation.

Despite differences of opinion about methods, most of those at the Workshop seem keenly favorable to Relative Value. States that have made Studies intend apparently to make revised studies from time to time, probably at from two to four-year intervals, and in between times they use Committees to add new procedures or to make necessary changes. States that have not made Studies thus far, intend apparently to do so, though in this respect I did not gather what Alabama, Massachusetts, Minnesota, Oklahoma, and Texas plan to do. All the rest, however, appear to be active including Georgia, whose House of Delegates has voted for a study, and whose representative was present to learn all he could about how to do it.

The representative of the Committee on Medical Economics of the American Academy of General Practitioners, Dr. Parks, states that the Academy . . .

- —approves Relative Value Studies
- —opposes dual values
- —will have a Medical Economics Committee in all local units of the Academy

The representative of the American Society of Internal Medicine, Dr. Berry, states that the Society . . .

- —has an internists' Relative Value Scale for each State
- —opposes dual values

Information Sought In Questionnaires

In practically all Questionnaires, doctors are asked to check occupational classification and county or region of practice, in order that tabulations of these can be made. Tabulation by County, in addition to State-wide, has been made in California, Mississippi, and perhaps other States. Dollar conversion factors have been provided to counties in California from data in the Questionnaire returns.

In Iowa, while no signature was required, each Questionnaire was accompanied by a postcard addressed to the County Secretary to say that the doctor had replied, so that a follow-up could be sent to those who did not reply. The final follow-up in Iowa was a brief Questionnaire of only half a dozen procedures to which a good number of replies was received from those who did not answer the longer Questionnaire.

Iowa developed a detailed time schedule for each step. This might be worth asking for from Mr. Huston of the Iowa Society.

A Blue Shield View

Mr. Redd of Kansas Blue Shield states, as do others, that in his opinion Relative Value Scales should reflect existing patterns of charges made by doctors rather than seeking to create new patterns. It is not the proper function of a Relative Value Study to upgrade units for any specialty or group of physicians: there should be other methods of correcting whatever inequities exist. These inequities may be exposed through Relative Value Studies, but their correction is not a proper objective of a Relative Value Study. With this view, most of those at the meeting (though probably not unanimously) are apparently in accord: Drs. Hoskins and Zellner quite definitely so.

Blue Shield prefers an integrated approach to values of procedures rather than separating Medicine, Surgery, X-Ray, and Laboratory from each other. Others at the meeting indicate their belief, however, that doctors should not be governed by what Blue Shield or other insurance carriers want. It is not the doctors' function to simplify the actuarial problems of Blue Shield or others.

In applying a Relative Value Scale to a Blue Shield fee schedule, Blue Shield has to compute what its total dollar requirements are per point in the Relative Value Scale. If for some procedures this means increased fees, it follows that unless premiums are increased, fees for other procedures must be reduced. Dr. Zellner of Florida states that in negotiations in that State with various third parties, this kind of adjustment has already taken place, based on the Relative Value Scale. He says that as to Blue Shield, the crux of the problem is that if fees for some of the high frequency procedures are to come up, then the fees for some of the less frequent procedures must come down.

Mr. Redd seems to think that Blue Shield does not know how faithfully Relative Value Scales reflect the actual situation in normal practice. I assume that he would trust the results of a Questionnaire survey to a greater degree than a Scale developed solely, or mainly, by committee discussion.

Views Of The Health Insurance Council

Mr. Hoffman of the Equitable Life Assurance Society spoke as a representative of the Health Insurance Council. The paper he read is rather general in nature, but of value in the education of the physician and will be published as a separate paper.

The Blue Shield's Professional Services Index For National Accounts

Outside of the Workshop meeting, comment was made unfavorable to the Professional Services Index developed by Blue Shield Plans to be applied to fee schedules for national account contracts. The Index was developed by a Blue Shield Committee of which Dr. Horton of Connecticut Medical Service was Chairman.

The Professional Services Index is criticized as not sound because it is based not on patterns of medical practice but upon a composite of existing Blue Shield schedules which themselves fail in most instances to reflect actual patterns of medical practice in the various geographical areas.

Also, too many of the various Blue Shield Plans which have developed fee schedules based on Relative Value Scales, have utilized Scales developed either through discussion committee or by modifying the California Scale without collecting from physicians in the various States the fees which they charge in normal practice.

Thus, once again, emphasis is placed upon the wisdom of using Questionnaires to ascertain from physicians themselves the fees they charge in normal practice, and then basing Scales and fee schedules upon the results.

Pertinent to Connecticut, I suggest the following, based on the Workshop and on talks with individuals there . . .

—if CSMS has not already had legal opinion from attorneys familiar with Federal and State anti-trust statutes and the applicable common law, I suggest that you get it. You may not necessarily be bound by what such attorneys say, but you should have their opinion.

—proceed as you have been doing with a comprehensive list of procedures, but use key procedures in the Questionnaire, possibly reducing the present list even further on grounds both of expense and getting the largest number of doctors to reply.

—under Surgery consider eliminating the column on two weeks of aftercare, and including instead the normal period of aftercare, specifying in each proceude precisely what the normal period is.

—under Medicine, consider the phraseology developed for the 1960 California Relative Value Scale.

—consider whether it would be advantageous to substitute for the Pathology heading, a heading on Laboratory or on Pathology and Laboratory, with possibly some corresponding changes in the list of procedures.

—throughout the Study and the Scale, aim to reflect existing patterns of practice and fees, resisting attempts, if any are made, to use Relative Value as a means to change patterns or to alter economic relationships between groups of practitioners.

—send for certain helpful materials (if you do not already have them) such as the Internists' Relative Value Scale for Connecticut; the Relative Value Schedule of the College of American Pathologists (1961); the Radiology Relative Value Schedule of the American College of Radiology (1961); the Michigan State Medical Society Relative Value Scale and Recommendations, if these are approved by the House of Delegates in the week ending September 23, 1961; the Time Schedule used by the Iowa State Medical Society in conducting its Study and publishing the Iowa Unit Fee Index; and the Questionnaire currently being used by the Illinois State Medical Society.

Around The State

New Haven County

The 178 the semi-annual meeting of the New Haven County Medical Association, followed by dinner, was held at the Waverly Inn on October 19. Thomas Feeney, President of the Connecticut State Medical Society and Clyde Deming, President-elect, addressed the Association on matters of current concern. Dr. Feeney conveyed the welcome information that the Connecticut General Assembly has approved implementation of the Kerr-Mills legislation, to become effective in April, 1962. Dr. Deming reviewed recent progress in the increasing effort to keep medical practice in this country on its foundation of freedom.

Orvan Hess, Secretary of the Connecticut State Medical Society, told the Association that refugee Cuban physicians presently in Florida are available to fill medical positions and would welcome the opportunity of doing so in Connecticut. William R. Richards, General Manager, emphasized among other needs the development by our Association of a Speakers' Bureau. Once in operation the bureau is to serve as a reservoir of speaking talent which may be drawn upon to present professional viewpoints, chiefly in relation to economic matters, before lay audiences. Members of the association are urged to volunteer for the course of training and education that will be given in preparing them for this very important assignment.

Among items in the semi-annual report of the Board of Governors, read by Hyman A. Levin as clerk, was a statement as to the association's financial position. The position is sound, so that no dues increase is foreseen for the coming term. Israel Blodinger discussed topics currently under consideration by the Board of Directors of C.M.S. Proposals have been made to increase the service benefit level of the preferred contract by $500 in each category.

Among a variety of matters presented for consideration by President Anthony Mendillo was the recent offer of Station WNHC, New Haven, to extend radio and TV facilities to the association if it wished to develop programs of medical interest. The opportunity this offers for giving the public a truthful and hence favorable image of our profession is indeed challenging. It is hoped that means will be developed in the near future to take advantage of it.

Spirited discussion followed reading of a proposed by-law amendment to prevent the introduction of written slates of nominees for the nominating committee. The proposal was defeated, however, by a large majority. A resolution was passed expressing the association's confidence in the A.M.A. This was in response to a suggestion originated by the Medical Association of Georgia.

The following members were elected to the nominating committee: William J. Beard, William B. A. Bentley, Charles T. Flynn, Jr., Irving Katz, Oscar Rogol, Lawrence M. Tierney, Allen H. Minor, Russell V. Fuldner, Walter S. Morgan, Frederick H. Treder, Orvan W. Hess, Paul W. Vestal, Max Lear, Lycurgus M. Davey, and Daniel S. Andrus.

The 178th annual meeting of the New Haven County Medical Association will be held on Thursday, March 22, 1962, at the Waverly Inn, Cheshire. The business meeting is scheduled for 2:30 P.M. Further details will be furnished you as soon as arrangements are completed.

Doctor's Office

Jose C. Aguiar, M.D., announces the opening of an office for the practice of otorhinolaryngology at 442 Temple Street, New Haven.

Paul Coleman, M.D., John J. McDermott, M.D., and Raphael D. Schwartz, M.D., have announced their partnership for the practice of internal medicine at 44 Main Street, Danbury.

J. Robert Cornwall, M.D., announces the opening of an office for the practice of radiology at 49 DeForest Avenue, Watertown.

Francis T. Curis, M.D., announces the opening of an office for the practice of pediatrics at 40 Wethersfield Avenue, Hartford.

Stephen P. Donnelly, M.D., announces the opening of an office for the practice of orthopedics at 609 Shuttle Meadow Road, New Britain.

Edward M. Keelan, M.D., announces the re-removal of his office from 135 Gulf Street to 1312 Boston Post Road, Milford.

Saul B. Meltzer, M.D., announces the removal of his office from 884 Lafayette Street to 2660 Main Street, Bridgeport.

Anthony V. Piccirillo, M.D., announces the removal of his office from 153 South Main Street to 80 South Main Street, Wallingford.

Samuel A. Rose, M.D., and Lloyd C. Fisher, M.D., announce the removal of their offices from 65 South Street to 98 Hoyt Street, Stamford. Dr. Rose is restricting his practice to cardiology and Dr. Fisher will continue in internal medicine.

Joseph G. Rossi, M.D., announces the opening of an office for the practice of pediatrics in association with Dr. Francis W. Westneat at 2331 Whitney Avenue, Hamden.

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Statement Of The American Society Of Internal Medicine

RE: H.R. 4222 87th Congress Health Insurance Benefits Act of 1961 Before Committee on Ways and Means House of Representatives

Stewart P. Seigle, M.D.

Mr. Chairman and Members of the Committee:

I am Dr. Stewart P. Seigle of Hartford, Connecticut. I am appearing today as the representative of the American Society of Internal Medicine, a confederation of societies of Internal Medicine in 46 states, the District of Columbia and Puerto Rico, representing nearly 8,000 physician specialists in internal medicine. Our prime area of activity is the diagnosis and treatment of disease in adults and we attend a high percentage of aged persons. I wish to discuss with you some of the dangers I think are inherent in the Health Insurance Benefits Act of 1961.

I am engaged in the private practice of Internal Medicine in Hartford, Connecticut, but in the past few years I have discussed many of the social and economic changes which threaten the continuation of high quality medical care with other doctors throughout the counrty. I think we are living in the most fascinating era in medical history. The last 50 years have seen fundamental changes in medical care which derive basically from advances in science and technology—but also from evolutionary changes in our democracy.

Scientific advances have directly resulted in improving the quality and increasing the complexity of medical care. They have resulted in greater specialization within the profession and in the development of many auxiliary groups and agencies who perform specialized services. All of this has increased the cost of illness, but not so much as have the rising costs of labor and materials and the cost of living. Further, these advances have been so effectively publicized that there has arisen a curious and fallacious concept that modern medical care is a commodity suitable for mass production and mass distribution.

On the theory, which I believe is erroneous, that people over 65 are not getting good medical care, there is proposed under H. R. 4222 a method to pay for hospitalization and hospital diagnostic outpatient facilities through the Social Security mechanism.

First let us examine the benefits offered under the heading:

Utlization of hospitals by aged persons:

From the medical point of view, getting more elderly people into hospitals is not the best way to improve their medical care. Yet any government policy which sets a premium on hospitalization is bound to result in more hospital admissions. A 1957 report by the Blue Cross Commission indicated that utilization of hospitals among Americans over 65 averaged 2.5-3 days per year per person. In Saskatchewan, Canada, which has "free" medical care, utilization within the same age group averaged 7 days per year. The reason ascribed is that the Saskatchewan plan is oriented toward hospital care as is H.R. 4222.

As a matter of medical fact, many of the ills of the elderly are better cared for in the home and the office than in the hospital. Taking an aged person out of his own environment and hospitalizing him can be a dangerous experiment both psychologically and physically. Specifically, an elderly person taken out of his own surroundings is apt either to become completely dependent upon hospital care, or, conversely, he may become disoriented, develop pulmonary or urinary tract infections and present a more serious problem in medical care than he did at the start.

With modern armamentarium of antibiotics, diuretics, chemotherapy for malignant disease, drugs for arthritis, effective means of lowering blood pressure—many diseases formerly requiring hospital care are now better treated on an ambulatory or home basis.

When hospitalization is necessary, it can be extremely beneficial, but the decision for hospitalization should be a medical rather than an economic one. Since H.R. 4222 is institutionally oriented and would offer "free" care once the initial deductible expense was met, there would result an undue pressure from elderly people and their relatives for hospital admission.

Let us now examine the heading:

Utilization of hospital, diagnostic outpatient facilities:

In spite of all the technological advances in medicine, the best way still to make a diagnosis in medicine is for a conscientious physician to sit down with a patient, take a comprehensive history and then do a thorough physical examination. Out of this preliminary work should come well-founded ideas of what specialized tests or examinations, of the thousands available, are necessary to confirm the preliminary diagnostic impression. This is much the same approach which you gentlemen take in your considerations of such an item as H.R. 4222 which we are discussing today.

Out of the welter of medical technology, however, has arisen another philosophy to which non-medical people attach some significance. That is—if you toss a patients into a complex diagnostic grist mill of tests, x-rays, electrocardiograms, special examinations, etc., there will be cast out some recognizable shreds leading to a diagnosis and pointing the way toward treatment.

Under H.R. 4222 diagnostic services which are customarily furnished by a hospital to its outpatients for the purposes of diagnostic study would be covered.

I am fearful of such coverage of diagnostic facilities, even though the need for tests must be certified by a physician, because I belive it will lead to more testing and less thinking—a state of affairs which will not improve the health of the elderly. Also, diagnostic tests done in hospital outpatient departments are often more expensive than those done in the physician's office or in certified laboratories available to him. Finally, this mechanism makes unavailable to an elderly person for from a hospital outpatient department diagnostic facilities which might well be present in his doctor's office.

Earlier, I said that I thought that the theory that people over 65 could not afford or were not getting good medical care was erroneous.

The economic stress of World War II produced rising taxes, which resulted in deficit financing, tax-avoiding fringe benefits and monetary inflation which have profoundly affected our culture. All of these forces created a situation where many people could not pay out of pocket for the modern medical care they were determined to have. Then, during President Truman's administration, legislation was proposed which would provide compulsory federal health insurance for all. Luckily this did not pass and now even the strong supporters of this former plan admit that private insurance companies and the Blue Cross and Blue Shield plans have done an increasingly good job of providing medical coverage.

We are now in the same position with people over 65. Many things conspire to make the problem confusing. People are living longer so there are more elderly persons. There has been a constant urbanization since the 1920's. The large houses that could comfortably include grandma and grandpa have given way to the small ranch homes and the split levels. However, the Secretary of Health, Education and Welfare, in a report to the House Ways and Means Committee, pointed out on April 3, 1959, that the median total money income of retired Social Security beneficiary couples was $183 per month. The average net worth of a retired couple was $9,620, 75 per cent or OASDI beneficiary couples owned their own homes and 87 per cent of these homes were mortgage free.

The average Social Security benefit is $73 per month, but:

a) 1.5 million people now receive cash benefits from corporate pension plans. This number will rise in the future.

b) Approximately 1 million retired persons receive annuities privately purchased.

c) 1 million persons over 65 receive veteran's pensions and are also eligible for Social Security benefits.

d) 4 million individuals over 65 are employed.

American democracy has always been strongest when it has built upon tried and true principles and when it has depended upon the initiative of our citizens. The continued encouragement of voluntary insurance coverage of people over 65 will, in the next few years, make their position as favorable as for those under 65, and will create no revolutionary change in our country's method of providing medical care. In this area the Federal government could provide help and incentive by allowing tax exemption for monies spend by children to provide health insurance for their elderly parents. For the medically indigent, the present medical coverage will continue to function. For the near indigent or for those undergoing a prolonged or catastrophic illness, the help of the Kerr-Mills law may be invoked. Thus we shall end up with most people over 65 able to provide for themselves with the aid of voluntary health insurance and individual and group initiative will continue to cope with the majority of medical problems.

WOMAN'S AUXILIARY

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County Notes

New Haven County has sponsored an "Invitation to Remain at Home" among its members for contributions to their scholarship fund. They have also assisted the New Haven County Medical Association in a symposium on Athletic Injuries.

Mrs. Andrew Lasko of Danielson, a member of the Windham County Auxiliary, described the operation of her group of "Cheer—I—Aids" at the Day Kimball Hospital in Putnam for the fall meeting of Windham County. Two nursing scholarships have been awarded by Windham County.

Fairfield County held an Autumn Ball on October 28 for the benefit of their scholarship and welfare funds. They held a nurse scholarship tea at St. Vincent's Hospital in Bridgeport on October 24. Fairfield is also holding an extensive membership drive this year.

Middlesex County is continuing its 100 per cent contribution to the *Bulletin* this year. Their November meeting featured a talk by Mr. Jonathan Johnson of Newington on "Civilian Defense in the Home."

Since October of 1960 Hartford County has given uninterrupted volunteer service to the local Meals on Wheels program, delivering meals to the aged and infirm. One morning each week two volunteers drive their own cars, pick up the meals, and deliver them to the prescribed patients along a designated route, and then return the empty containers to Jefferson House where the hot meals are prepared. "Operation Coffee Cup" has been used extensively by the legislative committee.

Safety

This Auxiliary is an integral part of the Advisory Committee on Women's Activities of the state of Connecticut Safety Commission. The purposes of this committee is to establish a close working relationship between the State Safety Commission and leading women's organizations.

At the planning meeting last October a decision was made to promote the use of safety belts in automobiles. Statistics have proved that the use of these belts has prevented many accidents, both minor and major. We are all urged to install them and use them, whether going to the corner store or on a long journey. Amazingly, a long trip is more restful with the reassurance of a seat belt.

The Commissioner of State Police, Mr. Leo J. Mulcahy urges us all to have the social maturity to face up to the mounting accident toll and to take an active interest in the enforcement tools the state police feel essential if they are to save lives. If the state legislators know we are interested in proposed traffic laws they too will be interested. Of special note is the need for tightening driver licensing with better physical and mental examinations and reexaminations, maximum speed laws, and chemical tests for intoxication. Only when people understand the necessity for laws to enforce safety can we have any real measure of safety.

—Mrs. James S. Van Leuvan,
State Safety Chairman

The Memorial Fund Of The Woman's Auxiliary To The Hartford County Medical Association

Begun in 1948, The Memorial Fund of the Woman's Auxiliary of the Hartford County Medical Association has given to date $26,082.25 in scholarship aid to young men and women needing financial assistance in their medical and nursing careers. This fund was established as a memorial to the deceased physicians of Hartford County, and is administered by three trustees who serve for a period of three years. There have been 34 scholarship recipients. Preference is given to residents of Hartford County.

All manner of projects have been used to raise this necessary money including an annual rummage sale, a variety of at home parties, dances, and an annual voluntary contribution by members.

This year five scholarships will be given, totaling $3,070.00. Four of these are scholarships for medical school and one for a college nursing degree.

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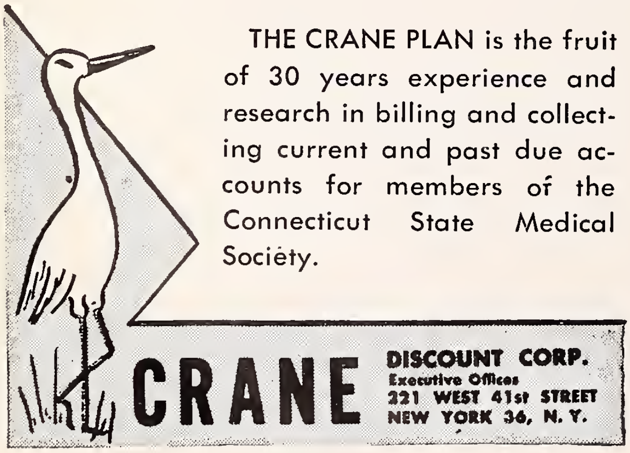

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Special Notices

NUTRITION EDUCATION

In order to keep abreast of the progress in basic and applied nutrition, the Stamford Academy of General Practice has arranged a series of lectures on clinical nutrition and metabolism to be held monthly at the Stamford Hospital Auditorium, Stamford, Connecticut. The National Vitamin Foundation is sponsoring this program. The schedule of lectures is as follows: Sept. 12th, Edward H. Resiner, Jr., M.D., New York City, "Vitamin B-12 and Folic Acid in Medical Practice"; Oct. 10th, David B. Coursin, M.D., Lancaster, Penna., "Nutrition in Children and Adolescence"; Nov. 21st, C. Wilmer Wirts, M.D., Philadelphia, Pa., "Nutrition in Gastrointestinal Diseases"; Dec. 12th, Harold M. Nitowsky, M.D., Baltimore, Md., "Nutritional Deficiences in Infants and Children with the Malabsorption Syndrome"; Jan. 16th, 1962, Elaine Ralli, M. D., New York City, "Nutrition and Oral Hypoglycomic Agents in Diabetes Mellitus"; Feb. 13th, James H. Shaw, Ph.D., Cambridge, Mass., "Nutrition and Oral Health"; March 13th, Rachmiel Levine, M.D., New York City, "The Basic Abnormality in Diabetes"; April 17th, Robert W. Hillman, M.D., New York City, "Management of Obesity"; May 15th, John F. Mueller, M.D., Cincinnati, Ohio, "Nutrition in Cardiovascular Disease"; June 12th, Garfield G. Duncan, M.D., Philadelphia, Pa., "Hypertension—Diet and Drug Therapy."

All members of the Medical Profession are cordially invited to attend.

For additional information contact Arthur Koffler, M.D., Chairman, Post-graduate Medical Education Committee, Stamford Academy of General Practice, 39 Glenbrook Road, Stamford, Conn.

POST-GRADUATE SYMPOSIUM ON INFERTILITY

New York University Medical Center in conjunction with the American Society for the Study of Sterility will present a symposium on infertility on February 8, 9, 10, 1962. This symposium is planned for urologists, gynecologists, endocrinologists, internists, and others who are interested in the problems of infertility. Approximately one-third of the program will be devoted to the problems in the male, one-third to the female, and one-third to the couple. The material will be presented in the form of lectures, panels, and demonstrations.

The symposium will be staffed predominantly by a guest faculty of outstanding clinicians and researchers in the three areas to be covered.

The tuition will be $75.00. A detailed program and application may be obtained from the office of the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16, New York.

Book Reviews

PREVENTIVE MEDICINE IN WORLD WAR II, Volume V. Communicable Diseases Office of The Surgeon General, Department of the Army, Washington, D. C. 1961 530 pp. $5.75.

REVIEWED BY DENIS S. O'CONNOR

The importance of disease as distinct from injury in war can be realized by the fact that this is the fourth volume in the preventive medicine series. This volume deals with communicable diseases through contact or through unknown means.

While this is the history of communicable diseases in World War II, the experience must be the basis for any preventive disease planning for any future war as well as for a high degree of effectiveness in the peace-time army. Therefore, these volumes which are the history of a previous war are invaluable to those who must face mass casualties from disease and injury either in civilian or military life.

While most of the diseases considered in this volume are unusual, or rare diseases, in the continental United States, two conditions of common incidence created serious problems for the medical department—these were the fungus infections and the venereal diseases.

The fungus diseases are of relatively minor importance in civilian life but under military conditions the attention to foot hygiene cannot always be carried out and aggravation of a fungus condition renders a person incapable of being effective militarily.

The venereal diseases have always been a military problem and probably always will be. Prevention rather than treatment is the goal which must be sought for but this requires education, discipline and moral training, all of which require time for development. That the problem is always there must be recognized by all persons in authority and all sources of prevention made use of. It is the many approaches to this problem as pictured in this volume that the student of the problem will find ideas which may lead to success in the handling of this problem.

Hepatitis became a real problem due to transmission through serum used in prophylactic injections.

With our present knowledge of the transmission of these diseases one would hope to avoid the problems which these diseases brought in World War II.

ADRENERGIC MECHANISMS. Editors for the Ciba Foundation, G. E. W. Wolstenholme, and Maeve O'Connor, B.A., Little Brown & Co., Boston, Mass. 1960, 595 pp. $12.50.

REVIEWED BY JAY GOODKIND

In March 1960 a symposium was held in England at which leading investigators from many countries discussed various aspects of adrenergic mechanisms. The present volume is a record of that symposium and represents a very thorough and complete review of a rapidly changing field of investigation. There were eight meetings during the four-day period. The topics covered included the metabolism of the transmitter substances, their storage, the adrenergic nerve and factors influencing release of transmitter substance, clinical studies of adrenergic mechanisms, the biochemistry and pharmacology of adrenergic receptors, actions of some miscellaneous catecholamines, the adrenergic mechanisms of the central nervous system, and finally, some miscellaneous papers relating to the problem.

The major pathways of biosynthesis of the catecholamines have been studied in detail utilizing techniques such as parenteral administration of tritium-labeled catecholamines and their precursors, tissue analysis and chromatographic analysis of urinary catecholamines. Many of the major contributions to this field were reviewed by Doctors Kirshner, Schumann and Axelrod. Dr. Axelrod discussed the evidence for the prime importance of catechol-o-methyl transferase in the deactivation of epinephine and norepinephrine.

Under the chairmanship of Dr. H. Blasko several authors described the chromaffin cell and the storage of catecholamines at the subcellular level. Drs. Hagen and Barnett presented studies using density gradient contrifugation that have isolated relatively homogeneous collections of catecholamine-rich granules from the adrenal medulla. They have harvested large enough quantities to premit analyses for high energy phosphates, enzymes and catecholamines, and were able to distinguish two apparently distinct types of granules, one containing mainly epinephrine and the other norepinephrine. Other speakers presented evidence for the presence of two cell types in the adrenal medulla, one for each of these catecholamines.

Another very important session dealt with the biochemistry and pharmacology of the adrenergic receptors. Excellent papers were presented on the theories of receptors biochemistry and the biophysical changes in tissues brought about by catecholamines. Several papers discussed cyclic adenosine monophosphate and its part in catecholamine activity. Lastly, a major session during the symposium dealt extensively with the effects of epinephrine and norepinephrine on the reticular activating system. An excellent review of the evidence for adrenergic mechanisms in the brain was presented by Dell.

The symposium is a superb reference source for a large and complexly interrelated series of subjects concerning the sympathetic nervous system. The many reports and excellent discussion sections are well written and have the rare quality, not often achieved by such complex symposia, of having very little repetition of material. This symposium will definitely appeal to workers in many disciplines.

PATHOLOGY, 4th Edition by W. A. D. Anderson, M.D., The C. V. Mosby Company, St. Louis, Missouri, 1961, 1389 pp. $18.00.

REVIEWED BY LOUIS H. NAHUM

The general plan of this book is the same as that of the previous three editions. Though it carries out its objectives in the original order, it has undergone extensive revisions. New chapters have been added on hypersensitivity diseases such as collagen disorders and also mesenchymal tumors of soft tissues. New findings and newly recognized conditions such as carcinoid syndromes, aldosteronism, familial chronic idiopathic jaundice (Dublin-Sprinz disease), and pulmonary alveolar proteinosis are a few examples of a long list of the dynamic advances of the last few years which have been introduced in this volume. The knowledge recently gained from histochemistry and the electron microscope have extended morphologic pathology to new horizons and the various authors have drawn liberally upon these disciplines.

Several things make a successful textbook of pathology. It should be so written that one can correlate its principles and knowledge with other aspects of clinical practice. There should be a thorough coverage of the subject. Implicit in its contents should be the idea that a student is beginning a subject which he must continue to cultivate through his active life, both as a student and later as a physician. He should be imbued with the urge to learn and apply principles of pathology and to come back to his book for knowledge and reference. In all these areas the student will not be disappointed in this book.

The order of presentation is logical and effective in teaching medical students and doubtless facilitates study and reference also by graduates. There are thirty-five outstanding pathologists who have contributed in their particular field and precisely defend their particular points of view. The unifying principle is the belief by all of them that pathology should form the basis of every physician's thinking about his patients. Since there are many different aspects of disease from that of the geneticist, cytologist, biochemist, physiologist, to the clinical diagnostician, it is certainly desirable that the pathologist should attempt to bring about a synthesis, to present disease as a whole or in as true an aspect as can be done with existing knowledge. It is important to stress the morphologic changes, in fact, pathologic anatomy and histology is an essential foundation for knowledge about disease and without it the concepts of many diseases could not be understood. But it is also necessary to undersand how the structural and molecular alterations affect function. In fact a morphologic approach to structure implies a correlation between form and function, thus it is a branch of living anatomy.

Those who look for effects of radiation will find it. Increased attention is given to viral, protozoun parasites and tropical diseases. More than usual attention is given to diseases of the skin, of the organs of special senses, of the nervous system and of the skeletal system. This means not only elementary students but specialists can turn to this text for information and references.

The scope of the work is so great that to include as much as possible of this advancing field the publishers found it necessary to use finer print and double columns per page. The fine print detracts somewhat from the otherwise excellent contents of this worthy book.

QUANTITATIVE VECTORELECTROCARDIOGRAPHY by Louis Brinberg, M.D. Waverly Press, Inc., Baltimore, Maryland 1960 123 pp. $5.25.

REVIEWED BY LOUIS H. NAHUM

This book is based upon papers published in the *Journal of Mount Sinai Hospital* during 1957 to 1959 and one paper in *American Journal of Medicine* 1957. It is highly technical filled with geometry and some mathematics and entirely descriptive in nature. Because of its highly technical nature it will not be too meaningful to the clinical electrocardiographer and consequently will be of limited usefulness to the practicing clinician. Like all vectorcardiography, it is based on the assumption that the heart is a dipole and its electromotive forces can be so treated. In point of fact the human and dog heart are too complicated to be treated as a dipole and as work from our laboratory has shown, may at times be represented by more than two dipoles just as Eyster showed for the amphibian heart as far back as 1934. The vectorcardiogram is a record obtained by uniting electromechanically two specially chosen leads and any knowledge to be obtained from it will have to be derived not from theory but from clinical-pathological correlations. At present, it does not contribute anything practical to clinical electrocardiography.

PATHOLOGY FOR THE PHYSICIAN. Sixth Edition by William Boyd, M.D., Professor Emeritus of Pathology, The University of Toronto. Lea & Febiger, Philadelphia, Pa., 1958 891 pp. $17.50.

REVIEWED BY LOUIS H. NAHUM

When an author arrives at the 6th edition of his book at least two things are manifested. There has been a great demand for it and it has kept pace with the progress of science. Both of these may be said about this book. Even the change of title reflects the changing times, for originally this work was called *Pathology of Internal Disease.* Now it is *Pathology for the Physician.* It is not just that the title is new. In many respects this is a new book. Each chapter now opens with "General Considerations" which contains the latest cytological, physiological and biochemical aspects of the subject. This is very evident in the chapters on Kidneys, the Respiratory System, Blood, and Endocrine Glands. Here we begin to see what the author is really trying to convey; "Morphology by itself is no longer enough", for with every disordered structure there is also a disordered function and the physician must learn to correlate symptoms of the patient during life with the lesions present in the organs or tissues.

Medicine has rushed headlong forward in the last twenty-five years by virtue of the great expansion of knowledge in the basic sciences. As Alice in *Through the Looking Glass* says "It takes all the running you can do to keep in the same place. If you want to get somewhere else you must run twice as fast". Authors like Professor Boyd have tried to bring us to a new place by "running twice as fast" for us. Instead of pathology it is now pathologic physiology which is the watchword as indeed it was with the great masters before us. Virchow long ago defined disease as "the course of vital phenomena under altered conditions". A successful understanding of pathology can now only be achieved if it is associated with physiology, biochemistry and other rapidly growing basic sciences. The modern pathologist stands somewhere between the morbid histologist who can see only disordered cells and the electrolyte expert who has an eye only for ions; between the morbid anatomist who sees diseased organs and the humanist who sees only sick psyche in every illness. The conciliations between psyche and soma, "between the person as well as his potassium" is the task of all modern medicine. It was already proclaimed years ago by Osler who argued the need of a sound knowledge of the hidden processes of disease as revealed in pathology. A. Liebow of Yale has penetrated deeply into the philosophy of modern pathology when he stated that "modern pathology may be paraphrased as Investigative medicine, not merely the study of the morphology of diseased organs".

How well has the author captured the full meaning of modern pathology and succeeded in translating it for the physician. The answer must be "very well indeed". His discussion of the controversial origin of certain diseases as for example hypertension and atherosclerosis is admirably objective with only an occasional remiss in the direction of dogmatism. His treatment of the adrenal is characteristic of his whole present approach, a comprehensive discussion of the physiology and biochemistry correlated with morphology of a diseased gland. His discussion of carcinoid tumors of the gastro-intestinal tract is excellently correlated with serotonin, its physiologic actions all over the body and its pathologic alterations in the right heart. The morphologic effects of hypertension are closely correlated with the role of electrolytes and renal pathology.

The organization of each chapter is also of real practical value and should be "helpful to those unfortunates who have to face the ordeal of satisfying the examiners for the specialty boards . . ." There is a table of contents at the beginning which systematizes and classifies the material to follow.

The last chapter is in keeping with the authors philosophy of pathology since it is devoted to the "internal environment, its physiology and its disturbances".

The only real difficulty with the book is its large number of black and white figures. Clearly pathology now can best be illustrated by colored plates which alone can make clear the structural changes in an organ. Only by such slides is all pathology now taught and without such contrasts, much otherwise important detail must be lost. The twelve colored plates are beautiful. The 489 figures are by contrast dull. However, the cost of many colored plates would make the price prohibitive.

A valuable bibliography follows each chapter and no student need suffer from lack of direction for further reading.

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OBITUARIES

Jessie Weston Fisher, M.D.

1872 - 1961

Dr. Jessie Weston Fisher, age 89, died September 28th, at SunnyShore Villas, St. Petersburg, Florida where she had resided for the past several years.

Dr. Fisher was born August 10, 1872 in Cherry Hill, Maryland, daughter of Reverend John Wesley Weston, pastor of the Methodist Church and Laura Jones Weston. She was graduated from Women's Medical College in Philadelphia, Pennsylvania in 1893 and came to Middletown soon afterward to work in the laboratory at the Connecticut State Hospital. In 1898 she married Dr. William Fisher, who was assistant superintendent.

In 1916, at the request of the Middletown Doctors, and the Board of Directors of the Middlesex Hospital, Dr. Fisher started the first clinical laboratory at the Middlesex Hospital. She served as pathologist at the Middlesex Hospital from 1916-1938, at which time she became consulting pathologist. The Hospital Laboratory continued in the building planned by Dr. Fisher until 1953 when it moved into its new quarters. The Medical Board of the Hospital paid tribute to Dr. Fisher by dedicating the new laboratory, now known as the Fisher laboratory, to her in appreciation of the pioneer work, the breadth and quality of her pathology service, her many contributions to the field of medicine and to the growth of Middlesex Hospital and the quality of medicine practiced here. She faithfully attended Scientific meetings, read journals and was always in the forefront of advances in clinical medicine. She maintained her interest and enthusiasm even after retirement and was always an inspiration to her colleagues.

Dr. Fisher was granted a leave of absence in 1918 to serve with the American Red Cross in France during World War I. Her major contribution was in bacteriology where she did some special work on gas gangrene, but she frequently also acted as an anaesthesist. In 1923 The Women's Medical College invited Dr. Fisher to take the chair of bacteriology and pathology but she preferred to continue in the clinical field.

The Medical Staff of the hospital and several Medical Societies, recognized Dr. Fisher's leadership and organizational ability, as she was elected to serve in official capacities in the local, county and state Medical Societies and she was a charter member of the American Society of Clinical Pathologists. Dr. Fisher also found time to serve her community well. She was active in the American Association of University Women, served many years on the Portland School Board, the Portland Rationing Board, as Chief Medical Officer of the Portland Civil Defense program, on the School of Nursing Council of the Connecticut State Hospital and as a trustee to the Connecticut State Hospital. She was an active supporter of the church and was a charter member of a new Presbyterian church in St. Petersburg. She had a host of friends who admired and respected her.

In addition to her busy career in medicine, Dr. Fisher was a mother, grandmother, and great grandmother. She is survived by a son, William W. Fisher of Farmington, Connecticut, two grandchildren and three great grandchildren.

Christie E. McLeod, m.d.

Morris J. Radin, M.D.

1891 - 1961

Dr. Morris J. Radin, one of the founders of Mt. Sinai Hospital, died on July 22, 1961 at the Hartford Hospital after a short illness. He lived at 781 Farmington Avenue, West Hartford.

He was born in Poland, and came to Hartford at the age of two. He was graduated from Hartford Public High School in 1910, Yale University in 1914 and Columbia Medical School in 1916

Dr. Radin

He served as a captain in the medical corps during World War I. He was stationed at Camp Wheeler, Macon, Georgia, where he did research work on mumps.

He served his internship at Mt. Sinai Hospital in New York City and later served there as chief of the clinic. He retruned to Hartford to open his practice in 1920. At the time of his death his office was located at 36 Pearl Street, Hartford.

Dr. Radin was one of the ten founders of the local Mt. Sinai Hospital which bears the name he suggested. He served as chief of the medical staff at the hospital in 1952.

He was on the courtesy staffs at Hartford Hospital, St. Francis Hospital and McCook Memorial Hospital. He was a member of the American Medical Association, Hartford County Medical Association and the Connecticut State Medical Society.

Dr. Radin was a member of Temple Beth Israel and the Men's Club of the temple.

He leaves his wife, Cecile; two sons, Harley W. Radin of Summit, New Jersey and Robert J. Radin of West Hartford; a brother, Raymond J. Radin of Philadelphia, Pennslyvania, and a sister, Mrs. Rose Schor of Hartford.

To those who called him, friend, and there were many in all walks of life, he was recognized as a fine physician, sympathetic, and possesser of great, great kindness.

Sidney L. Cramer, m.d.

Ralph B. Thayer, Sr., M.D.

1895 - 1961

Dr. Ralph B. Thayer, Sr., 66, a county doctor for forty years died October 1, 1961, in Newfane, Vermont shortly more than a year after retiring from one of the busiest practices in North Central Connecticut.

Dr. Thayer was respected and revered by all the people of Somers, Connecticut, where he conducted his practice.

Dr. Thayer was honored twice in his lifetime by the people of Somers and surrounding communities. In May 1948 he was honored at a reception celebrating his 25th year of practice. On his retirement, May 1960, he was again honored by the same groups with many remembrances, among these, an album with the pictures of 750 of the 3,000 odd babies that he had ushered into this world.

A graduate of Bowdoin Medical College, he interned at the Waterbury hospital. He was a member and a past president of the medical staff of the Johnson Memorial Hospital, Stafford Springs; he was also a past vice-president of the Connecticut State Medical Society and a past president of the Tolland County Medical Association.

It is fitting to note that Dr. Thayer was referred to by his colleagues and patients as the last of the "good old fashioned" country doctors in this area. He will long be remembered by his many friends and patients.

Alfred Schiavetti, m.d.

Mildred Warden Couch, M.D.

1896 - 1961

Dr. Mildred Warden Couch died at the Hartford Hospital on October 10, 1961, after a long illness.

She was born on July 15, 1896, at Arcola, Minnetonka Beach, Minnesota, and attended the public schools in Minneapolis. She was a member of the first graduating class of the Smith College School of Social Work, during which time she had a year's training at the Phipps Psychiatric Clinic, Johns Hopkins University. This aroused her interest in psychiatry, so that she entered the field of medicine, and graduated from the University of Minnesota Medical School. She and one other woman were the first of their sex to interne at the Minneapolis General Hospital. They were the first to ride the city ambulance in spite of protestations from the Police Department, since those were violent years. She then served residencies in the Los Angeles Children's Hospital; the Westchester Division, New York Hospital. She served for a time as Fellow of the Institute of Child Guidance in New York City, and as a Medical Director of the Waterbury Life Adjustment Center. She was a consultant at the Connecticut College in New London, worked at the Yale Psychiatric Clinic, Grace-New Haven Hospital, and acted as an associate physician at Cromwell Hall from 1933 to 1956 with her husband, Dr. Frank Couch. Since 1956, she had been engaged in private practice until three months before her death.

She was a member of the Middlesex County Medical Association, the Connecticut State Medical Society, and the Connecticut Branch of the American Psychiatric Association. She was a life member of the American Psychiatric Association, the New York Society for Clinical Psychiatry, and the American Ortho-Psychiatric Association. She was a member of the First Congregational Church of Cromwell, Connecticut.

Dr. Mildred, called thus by fellow townsmen, colleagues, and even patients, was beloved by all who knew her, for her beaming smile, her gracious manner, and her sympathetic attitude. Though her work kept her quite confined to institution and office, she was always aware of the activities of the community in which she resided, and ready to contribute her help to its organizations. Her very nature kept her inconspicuous, but she will nevertheless be greatly missed by her friends, colleagues and patients.

She is survived by her husband, Dr. Frank H. Couch of Cromwell, and a brother and two sisters of Minnetonka Beach, Minnesota.

Walter N. Nelson, M.D.

In Memoriam

Daly, William P.—Hartford; Georgetown University Medical School, 1917; a Hartford physician for 42 years, Dr. Daly practiced medicine until the time of his death; he was a former president of the medical staff at St. Francis Hospital and former chief of obstetrics and gynecology at the hospital; he served residencies at Rotunda Hospital, Dublin, Ireland, and at Bellevue Hospital and Sloan Maternity Hospital, New York City; Dr. Daly in World War I served as a Captain in the Marine Corps; died at St. Francis Hospital October 29, aged 68 years.

Pratt, Aaron P.— Tolland; Harvard Medical School, 1922; after receiving his master's degree in public health from the Harvard-MIT School of Public Health, Dr. Pratt was appointed dean of the school in 1921; shortly thereafter he received his medical degree, interned at Hartford Hospital, and entered private medical practice in Windsor in 1924; he practiced medicine in that community until his retirement in 1956; in addition to his private practice, Dr. Pratt was physician for the Loomis School for 31 years and served as medical examiner for Windsor during the same period; he served as a lieutenant, U. S. Army, World War I and in World War II he was medical examiner for the local draft board and chairman of the Red Cross medical committee; died at Hartford Hospital November 8, at the age of 70 years.

1961 MEETINGS

Dec. 7—Semi-Annual Meeting, Connecticut State Medical Society, House of Delegates. Stratfield Hotel, Bridgeport, 2:00 P.M.

1962 MEETINGS

May 2-3-4—Annual Meeting Connecticut State Medical Society, Statler-Hilton Hotel, Hartford.

May 3-4 — New England Health Education Association—Spring meeting—Andover Inn, Andover, Mass.

May 18-19 — Connecticut Society American Board Obstetricians and Gynecologists Travel Club meeting in Montreal.

June 25-29—Annual Meeting, AMA Medical Association, Chicago.

Sept. 28—37th Connecticut Clinical Congress, Mary S. Harkness Memorial Auditorium at Yale School of Medicine, New Haven.

Nov. 26-29—Clinical Meeting, AMA, Los Angeles.

Connecticut Medicine

Connecticut State Medical Journal

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